

HISTORY *of* WAR



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VICTORIA CROSS HEROISM ON
THE WESTERN FRONT

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Manuals

"We were a
brotherhood"

LANCASTER RAID

SURVIVOR OF BOMBER COMMAND'S DARING 1944 CAMPAIGN

RAF ORIGINS

WWI's deadly Gotha raids & the
world's first air force



**WARS
OF THE
ROSES**

**BATTLE OF KINGS
MOUNTAIN**
Brother against brother in
the Revolutionary War



**MEHMED THE
CONQUEROR**
How the Ottoman sultan
crushed Constantinople

THE POLISH CAVALRY can trace its origins back to medieval times and the days of mounted knights. Poland being mostly a country of flatlands and fields is and was particularly well-suited for mounted forces to operate in.

Over the centuries, its knights and horse cavalry evolved into many different types of mounted military formations. Among the most famous were the heavily armoured 'winged hussars' and their more lightly armed 'uhlans' or lancers.

GERMANY ATTACKS!

ON SEPTEMBER 1, 1939, the German invasion of Poland began... At that time the cavalry made up just over 10% of the entire Polish Army. They were organized into 11 cavalry brigades, each composed of 3 or 4 mounted regiments together with attached artillery and armoured units.

These horsemen were regarded as the elite fighting formation of the army and were among the first to encounter the invading Germans.

During the short but bloody campaign there were countless battles and skirmishes between Polish cavalry units and the invaders... mostly fought on foot.

There were however no less than 16 confirmed cavalry charges which, contrary to common belief, were nearly always successful.



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'Long Live Poland!'

German/Polish border elements of the 18th Pomeranian Uhlan Regt. surprised a battalion of German infantry resting in some woods.

The Uhlans enthusiastically charged and the Germans fled in panic... Later it was also said that the Polish horsemen had attacked enemy armour with swords and lances... *Not quite true perhaps* but an almost mythic legend began which is still heard today... Even famed Nazi General Heinz Guderian believed the tale of

the gallant Polish Lancers taking on German tanks!

K & C's POLISH LANCERS

Our latest mounted figures portray a group of Lancers charging at full gallop towards the enemy... As the officer raises his sabre menacingly his guidon bearer rides next to him with the national colours. A trumpeter is close by...

Elsewhere three other horsemen lower their lances as they prepare to close with their German foes. One unfortunate Lancer though has had his horse shot from under him!

7 figures will be released in 2 small groups (including a dismounted Lancer standing defiantly over his dead horse not shown here). All are available as single pieces and together make a dramatic and exciting vignette seldom seen in the world of toy soldiers!

KING & COUNTRY

AUTHENTIC HAND-MADE HISTORY

Available around the world wherever fine quality military miniatures are sold.

Welcome

“We did a single-engine, one-wheel landing and skidded off the runway in the dark, hurtling towards the control tower”

– Russell ‘Rusty’ Waughman, DFC, AFC

Not long after the age of flight began, the world’s military minds were conceiving ways to dominate the new battlefields in the sky. During the final year of WWI, Britain was the first country to develop its own dedicated military force for both offensive and defensive purposes: the Royal Air Force.

This issue, **History of War** commemorates 100 years of the RAF, including an in-depth analysis of the force’s origins, a technical breakdown of a Hawker Hurricane and the story of William Barker VC.

We also have an interview with Bomber Command pilot Russell

Waughman, who shares his humbling experiences flying in perilous raids over Germany in the closing years of WWII.



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CONTRIBUTORS



TOM GARNER

This month Tom spoke with Russell ‘Rusty’ Waughman, who survived the perilous Bomber Command raid on Nuremberg in 1944 (p. 26). He also delves into England’s bloodiest dynastic clash, the Wars of the Roses, in this issue’s Frontline (p. 14).



MARC DESANTIS

The American War of Independence didn’t just see Patriots clash with British troops, but also American Loyalist militias. One such clash occurred at the Battle of Kings Mountain, which Marc relates in our Great Battles over on page 70.



STUART HADAWAY

Stuart is senior researcher to the Air Historical Branch and this month explores the origins of the RAF. Starting on page 36, discover how Britain’s pilots countered the deadly Gotha raids and how the world’s first air force was organised and formed.

www.historyanswers.co.uk



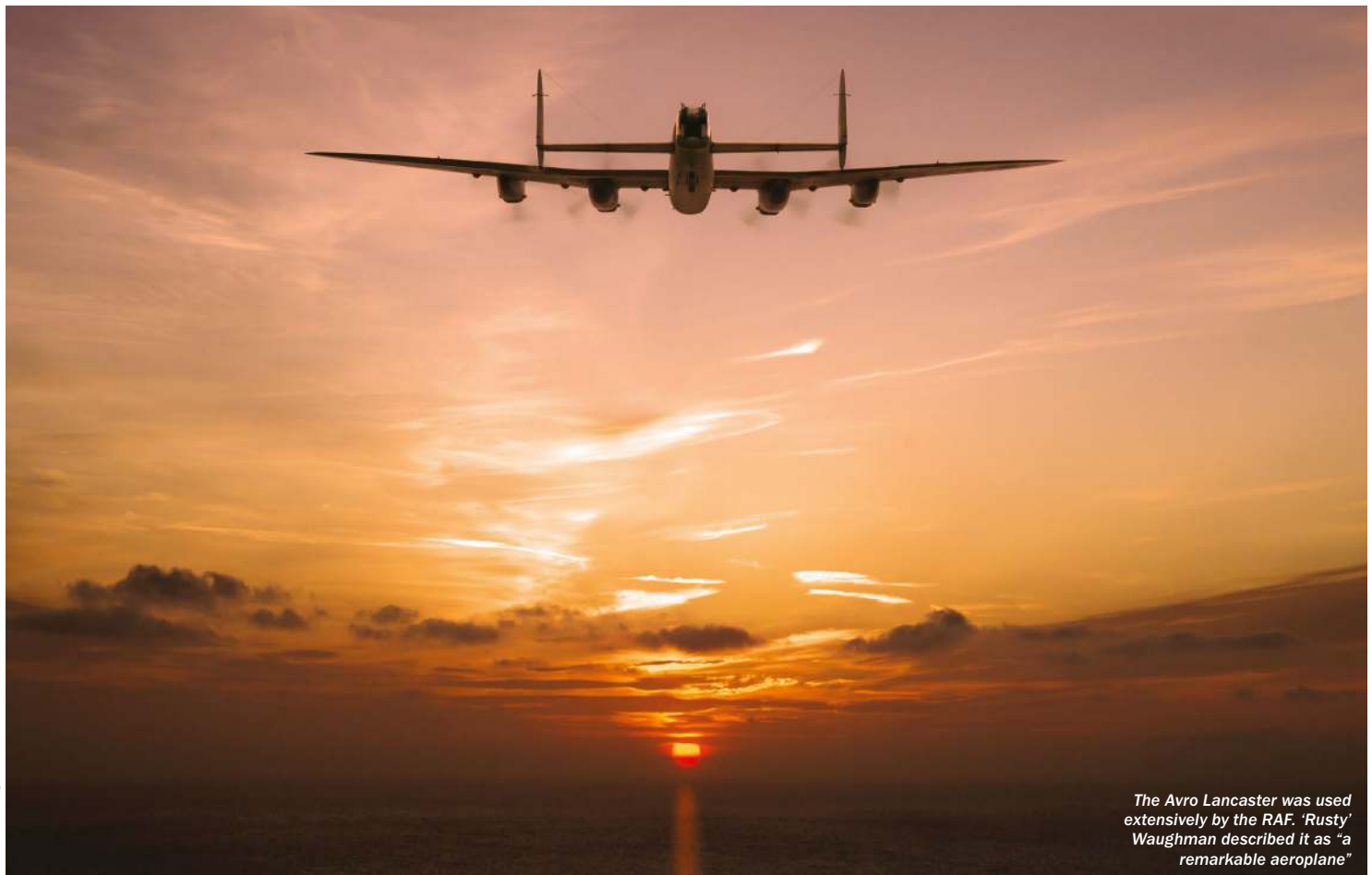
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The Avro Lancaster was used extensively by the RAF. ‘Rusty’ Waughman described it as “a remarkable aeroplane”



LANCASTERS OVER EUROPE

26 Russell 'Rusty' Waughman shares his experiences as a Bomber Command pilot



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England plunges into civil war as two rival dynasties battle for the crown

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Two families and their supporters warred mercilessly for control of the crown

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Edward IV faced off against his former ally, Warwick 'the Kingmaker', to secure the throne

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Fighting spread right across the kingdom as the country's nobility declared for either side

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Did the wars truly end at Bosworth?

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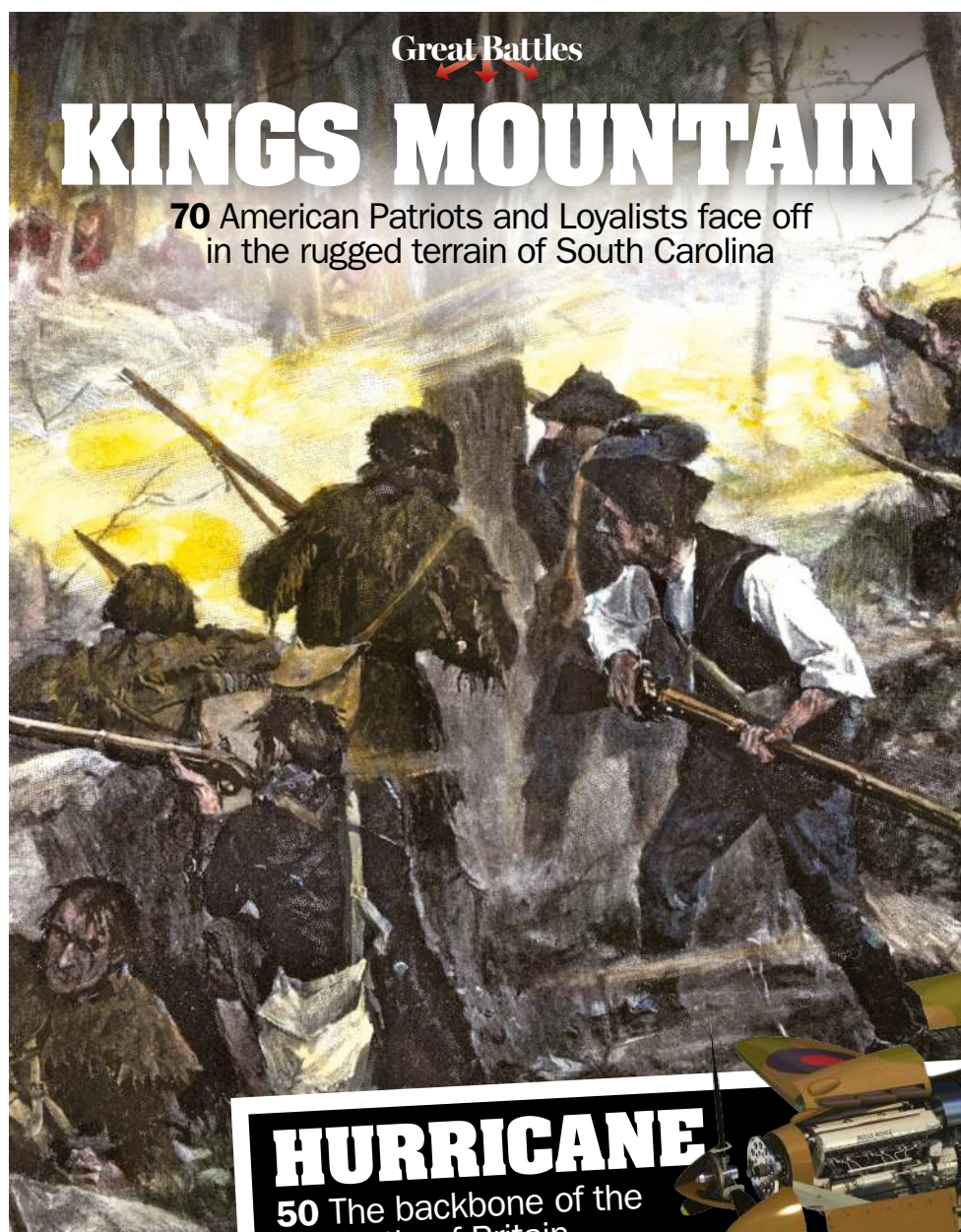


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Great Battles

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William Barker

This Canadian was once heralded as "the deadliest air fighter that ever lived"

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Take a look inside the aircraft that formed the backbone of Fighter Command

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Discover how this sultan crushed the remnants of the Byzantine Empire

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Kings Mountain
Patriot and Loyalist Americans clash in the rugged terrain of South Carolina

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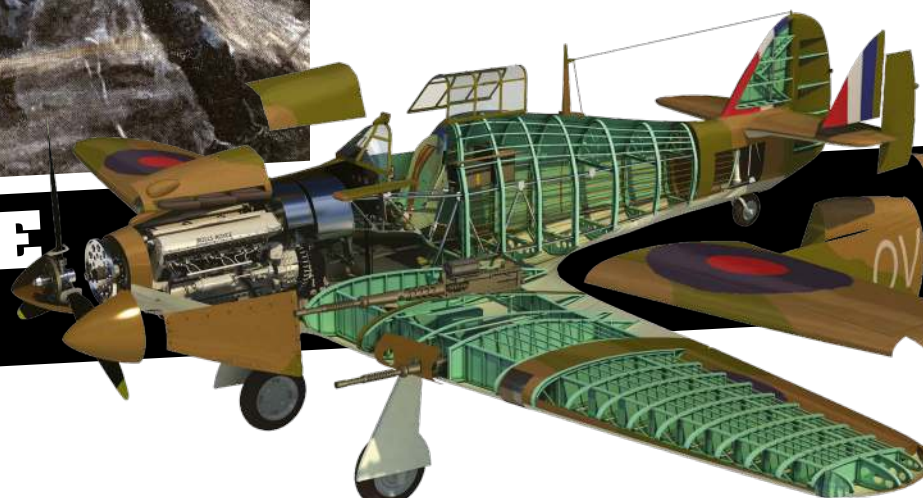
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West India Regiment flag
The beautifully preserved standard is a reminder of a horrific period of history







WARⁱⁿ FOCUS

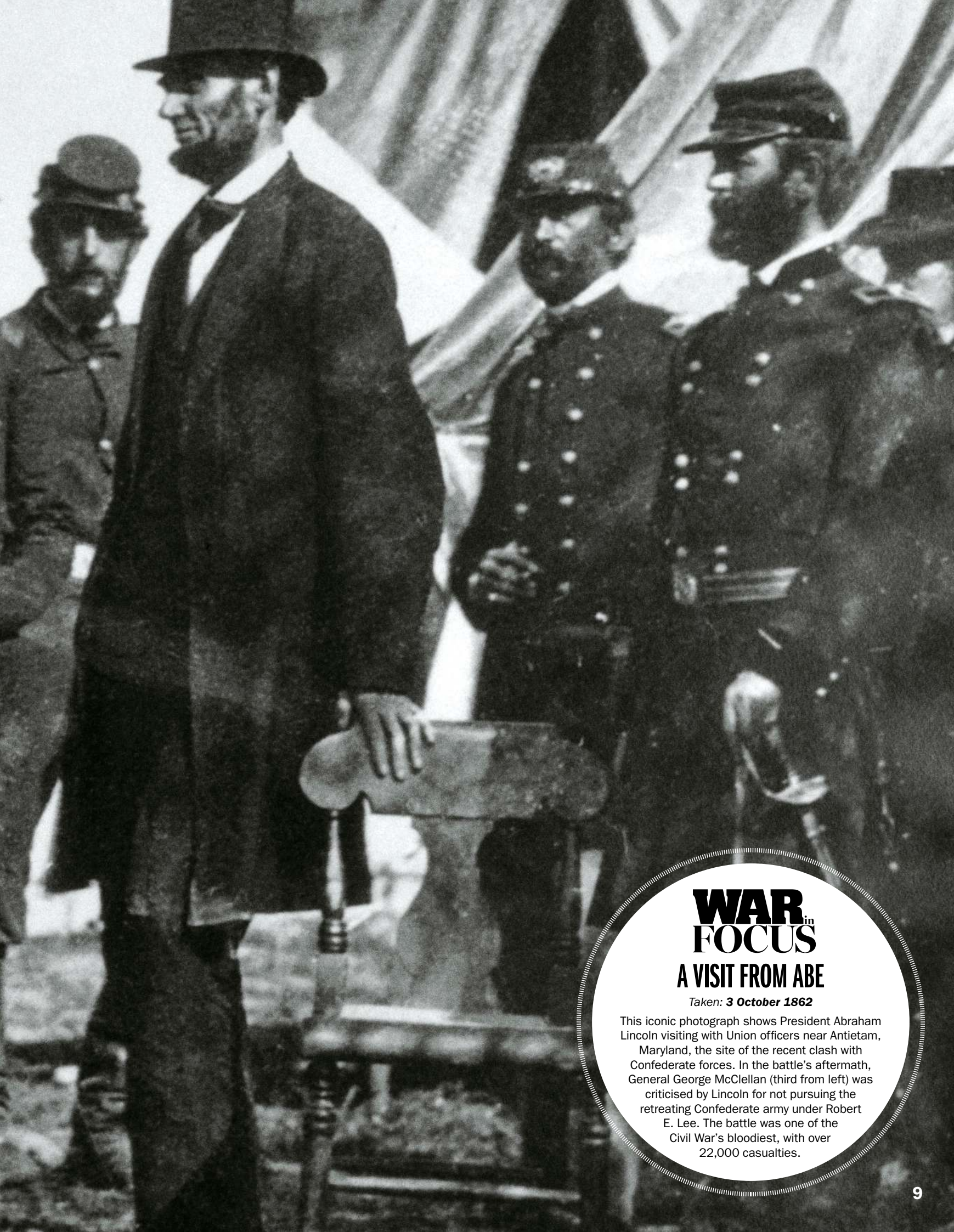
FLAME ON

Taken: 27 November 1942

A line of flamethrowers blaze upwards into the sky at the Army War Show, City Park Stadium, New Orleans. The show also featured tank manoeuvres, infantry drills and other weapons demonstrations.

These shows toured the USA with the aim of demonstrating to the public the tools available to America's armed forces, as well as to raise funds for the Army Emergency Relief Fund.





WAR_{in} **FOCUS**

A VISIT FROM ABE

Taken: 3 October 1862

This iconic photograph shows President Abraham Lincoln visiting with Union officers near Antietam, Maryland, the site of the recent clash with Confederate forces. In the battle's aftermath, General George McClellan (third from left) was criticised by Lincoln for not pursuing the retreating Confederate army under Robert E. Lee. The battle was one of the Civil War's bloodiest, with over 22,000 casualties.



WAR_{in} FOCUS

HOWITZER BLAST

Taken: **February 2009**

A self-propelled Dutch Army PzH 2000 (Panzerhaubitze 2000), fires off a round during an operation in Afghanistan. The German-made howitzer has a 155mm chamber, and has an effective range of up to 40 kilometres (25 miles). With its automatic loading system, the PzH 2000 is also capable of firing off a blistering three rounds every ten seconds.





WARⁱⁿ **FOCUS** **NOSE INSPECTION**

Taken: October 1942

Factory workers inspect the transparent plexiglass nose cones ready to be fitted onto A-20 Havoc bombers. Several variants of the A-20 were produced during WWII, with solid or glass noses fitted to suit either bombing, attack or reconnaissance roles. Although American-made, the Soviet Union was the largest operator of Havocs during the war, although all Allied nations flew them in various incarnations.





TIMELINE OF...

WARS OF THE ROSES

This conflict between the English royal houses of York and Lancaster was a series of bloody battles and depositions that would end in the rise of the Tudors

BATTLE OF TOWTON

Henry VI is rescued after the Second Battle of St Albans, and a determined effort is made to depose the newly proclaimed Edward IV. The resulting clash at Towton is probably the largest and bloodiest battle fought on British soil. Edward wins a decisive victory, and Henry VI and his family flee to Scotland.

22 May 1455

FIRST BATTLE OF ST ALBANS

The wars officially begin when a force led by Richard, Duke of York is intercepted at St Albans by a Lancastrian army including Henry VI and Edmund, Duke of Somerset. The battle is unconventionally fought in the streets. The Yorkists eventually prevail, Henry VI is captured and York becomes 'lord protector' of England.

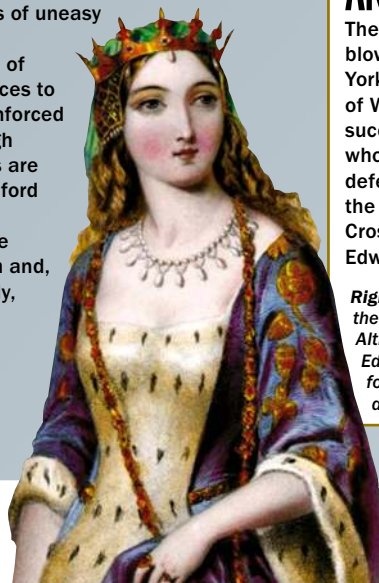
The Clock Tower in St Albans was built in the early 15th century and witnessed the rare sight of a pitched medieval battle being fought in a relatively urban setting

September 1459-July 1460

THE LANCASTRIANS FIGHT BACK

After a few years of uneasy truce, Henry VI's queen, Margaret of Anjou, raises forces to oppose York's enforced regency. Although the Lancastrians are victorious at Ludford Bridge, they are defeated at Blore Heath, Sandwich and, most significantly, at the Battle of Northampton, where Henry VI is captured for a second time.

Margaret of Anjou was the driving force of the Lancastrians



December 1460-March 1461

YORKIST SETBACK AND RESURGENCE

The Yorkists receive a severe blow when Richard, Duke of York is killed at the Battle of Wakefield. However, he is succeeded by his son Edward, who proceeds to decisively defeat the Lancastrians at the Battle of Mortimer's Cross and is proclaimed King Edward IV.

Right: Edward IV is crowned as the first Yorkist king of England. Although he was a Plantagenet, Edward became king through force of arms rather than dynastic inheritance

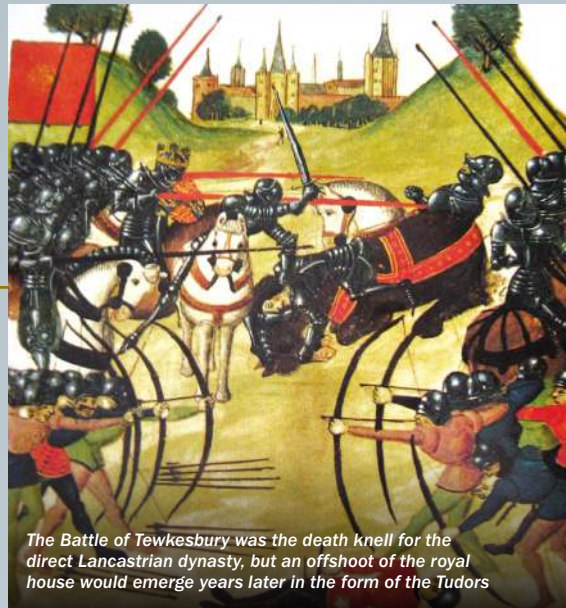


29 March 1461

"THE RESULTING CLASH AT TOWTON IS PROBABLY THE LARGEST AND BLOODIEST BATTLE FOUGHT ON BRITISH SOIL"



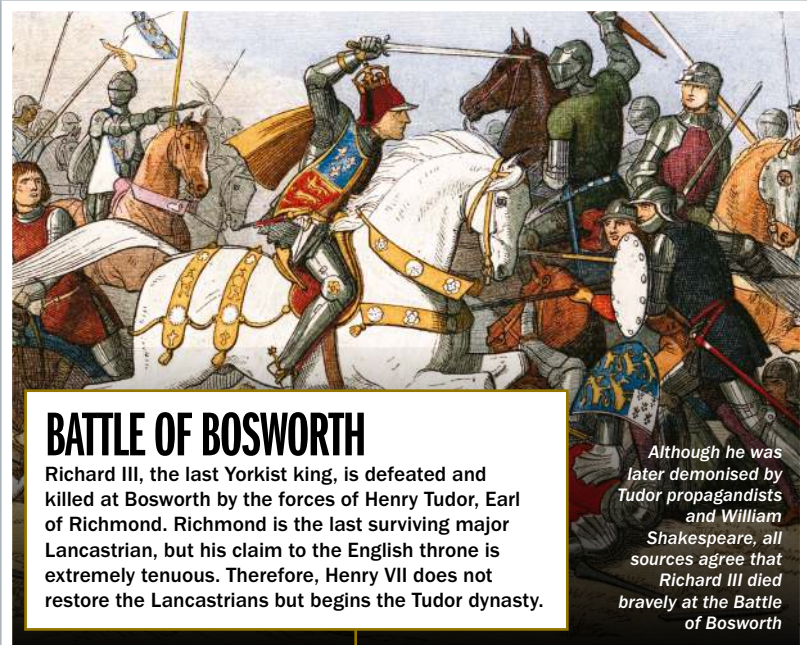
Although it is relatively forgotten today, it is reputed that 28,000 soldiers were killed at the Battle of Towton, and a mass grave has since been discovered



The Battle of Tewkesbury was the death knell for the direct Lancastrian dynasty, but an offshoot of the royal house would emerge years later in the form of the Tudors

BATTLES OF BARNET AND TEWKESBURY

Edward IV soon returns to England to reclaim his throne and wins decisive victories at the battles of Barnet and Tewkesbury. Warwick is killed at Barnet, while the Lancastrian cause is crushed decisively at Tewkesbury with the battlefield death of Edward of Westminster, Prince of Wales. Henry VI is subsequently murdered in the Tower of London.



BATTLE OF BOSWORTH

Richard III, the last Yorkist king, is defeated and killed at Bosworth by the forces of Henry Tudor, Earl of Richmond. Richmond is the last surviving major Lancastrian, but his claim to the English throne is extremely tenuous. Therefore, Henry VII does not restore the Lancastrians but begins the Tudor dynasty.

Although he was later demonised by Tudor propagandists and William Shakespeare, all sources agree that Richard III died bravely at the Battle of Bosworth

1470

READEPTION OF HENRY VI

After Towton, Henry VI spends some years in exile before being captured and imprisoned by Edward IV in 1465. Elsewhere, Edward's ally Richard Neville, Earl of Warwick rebels over political differences, and Edward is forced to flee to Flanders. Warwick then restores Henry VI to the throne in an event known as the 'Readeption'.



Rare gold 'Angel' Henry VI coins from the period of his Readeption. The coins show Archangel Michael slaying a dragon and Henry's shield being carried aboard a ship

14 April & 4 May 1471

22 August 1485

16 June 1487



Lambert Simnel was a juvenile Yorkist pretender who claimed to be Edward, Earl of Warwick. Henry VII spared his life to work in the royal kitchens, and he later became a falconer to Henry VIII

BATTLE OF STOKE FIELD

Contrary to popular belief, Bosworth was not the last battle of the Wars of the Roses. Richard III's nephew, John de la Pole, Earl of Lincoln rebels against Henry VII by claiming that a pretender called Lambert Simnel is Richard's heir. After a bloody battle at Stoke Field, Lincoln is killed and Simnel captured. The Yorkist threat to the Tudors is effectively destroyed.

Images: Alamy, Getty



DYNASTIES DIVIDED

The Wars of the Roses were a bitter dynastic struggle that embroiled several generations

EDWARD IV

THE POWERFUL WARRIOR KING WHOSE BATTLEFIELD SUCCESS ESTABLISHED THE YORKIST DYNASTY 1442-83 YORKIST



Although the final clash between Richard III and Henry Tudor defines the Wars of the Roses in the popular imagination, it was Edward IV who was by far the most dynamic and successful commander of the dynastic conflict.

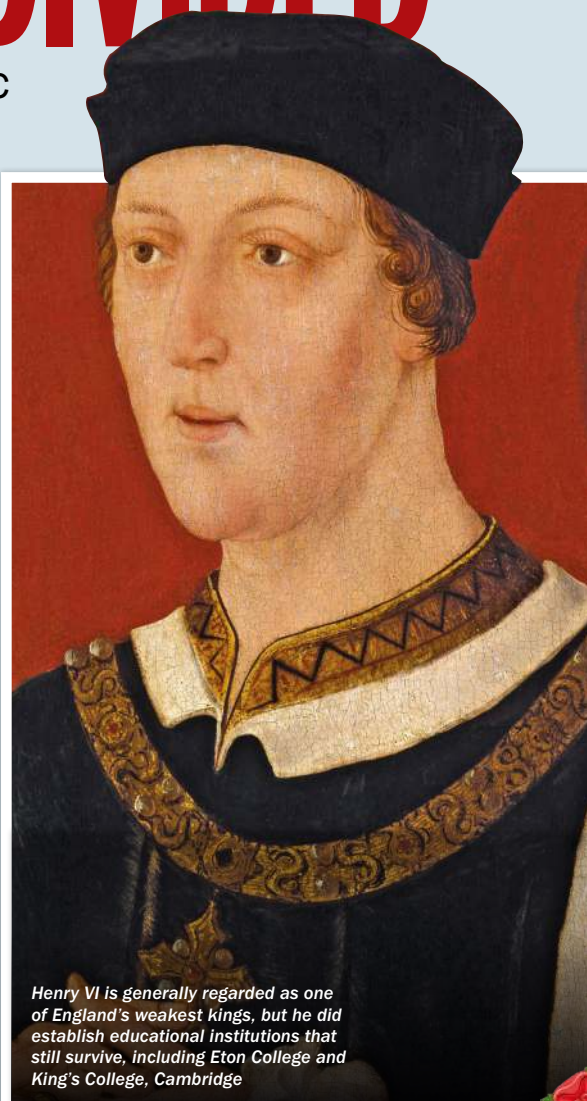
Edward was the eldest son of Richard, Duke of York and began fighting in the wars aged only 17. Aided by his father's closest ally the earl of Warwick, Edward became a formidable battlefield commander. Warwick and Edward won a significant victory at Northampton in July 1460, where Henry VI was captured, and the Yorkists began to unofficially rule England. York then officially attempted to claim the throne, prompting a Lancastrian revolt. After York was killed at Wakefield in December 1460 Edward became the leader of the Yorkists.

In February 1461 Edward won the Battle of Mortimer's Cross and was soon proclaimed King Edward IV in London. However, Henry VI had escaped and England now had two competing kings. The ultimate clash came at Towton, in an extremely bloody battle that Edward decisively won. Although he was still a teenager, Edward was physically imposing at 1.9 metres (six feet four inches) tall and played an active fighting role during the battle. Henry VI was captured years after Towton, but Edward's rule was momentarily secure.

From 1469 relations between Edward and Warwick became strained due to major political differences, and Warwick defected to the exiled Lancastrians. Edward was forced to flee to Flanders in 1470, but he returned the following year. Between April and May 1471 Edward won two decisive battles at Barnet and Tewkesbury that oversaw the destruction of Warwick and the Lancastrian cause. He then ruled peacefully until 1483, having won every single battlefield engagement he commanded. For this reason Edward IV is one the most militarily successful monarchs to have ruled England.

"ALTHOUGH HE WAS STILL A TEENAGER, EDWARD WAS PHYSICALLY IMPOSING AT 1.9 METRES (SIX FEET FOUR INCHES) TALL AND PLAYED AN ACTIVE FIGHTING ROLE DURING THE BATTLE"

After 1471 Edward IV firmly established the Yorkist hold over England but his dynasty only survived for two years after his death



Henry VI is generally regarded as one of England's weakest kings, but he did establish educational institutions that still survive, including Eton College and King's College, Cambridge



HENRY VI

THE TRAGIC MONARCH WHO LOST HIS TWO KINGDOMS, FAMILY AND LIFE 1421-71 LANCASTRIAN

Although he was the son of Henry V, Henry VI possessed none of his father's military abilities. Henry had been both king of England and France, but he lost the vast bulk of his French territories in 1453, which led to a severe mental breakdown and a power vacuum that sparked the Wars of the Roses.

Henry was no general, and senior Lancastrians took up military commands instead. Nevertheless, the king was present at battles – almost always in humiliating circumstances. At the First Battle of St Albans, Henry was abandoned by his men, wounded in the neck and captured by the Yorkists while hiding in a tanner's house. At the Battle of Northampton, Henry refused to parley with the Yorkists three times and was captured in his tent. He subsequently remained in York while his huge army was destroyed at Towton, before he was eventually imprisoned at the Tower of London.

In 1471 Henry was restored, but he was then deposed for a second time and forced to accompany Edward IV to witness the Lancastrian defeat at Barnet. The fallen king was murdered in the Tower shortly afterwards.



RICHARD, THIRD DUKE OF YORK

THE RIVAL HEIR TO HENRY VI WHOSE DANGEROUS MACHINATIONS SPARKED THE DYNASTIC WARS 1411-60 YORKIST



York's death at Wakefield became the unlikely subject of the mnemonic to describe the colours of the rainbow, "Richard of York gave battle in vain"

Richard, Duke of York was a powerful English magnate with royal ancestors that made him the heir presumptive to Henry VI. He had extensive military experience as the commander of English forces in France during the later stages of the Hundred Years' War and became the dominant noble in Henry's court. When the king suffered a mental breakdown in 1453, York became 'protector' of England and used his position to increase his authority.

This power struggle between supporters of York and Henry VI led to the outbreak of the Wars of the Roses. York won the First Battle of St Albans in 1455 and became the de-facto head of government. In 1459 York became even more assertive and led a rebellion that culminated in a Yorkist victory at Northampton. York now openly claimed the throne, but he was not accepted and was subsequently killed at the Battle of Wakefield. In a macabre mockery of his regal claims, the duke's body was beheaded and displayed on York's walls wearing a paper crown.



WARWICK THE KINGMAKER

THE MACHIAVELLIAN ARISTOCRAT WHO DEPOSED TWO MONARCHS 1428-71 YORKIST-LANCASTRIAN

Richard Neville, 16th Earl of Warwick was an extremely wealthy nobleman who was instrumental in deposing both Henry VI and Edward IV, which earned him the epithet 'Kingmaker'.

Warwick was a key ally of Richard, Duke of York and his men played a decisive role in the Yorkist victory at the First Battle of St Albans. He was subsequently made constable of Calais, which controlled a standing English army. Warwick's position in Calais was vitally important to Yorkist success, and he committed piracy to pay the garrison.

The earl loyally fought for the Yorkists, including at the decisive Battle of Towton, but he was previously routed while commanding troops at the Second Battle of St Albans. To secure Edward IV's rule he campaigned extensively in northern England to root out resisting Lancastrians, but he became dissatisfied with Edward's policies. In 1469 Warwick began a rebellion that briefly captured the king. Warwick then fled to France, where he defected to the Lancastrians and invaded England, which forced Edward into exile.

Warwick restored Henry VI and governed England, but Edward soon returned in 1471 and defeated the Kingmaker at Barnet. The over-mighty earl was killed in thick fog while trying to escape the battlefield.



The term 'kingmaker' was subsequently coined as a word to describe a person who brings leaders to power by exercising political influence

RICHARD III

THE LAST YORKIST AND PLANTAGENET KING OF ENGLAND 1452-85 YORKIST

Richard grew up during the opening phase of the conflict and was still a child when his elder brother was crowned Edward IV. Richard became duke of Gloucester and lived in the household of Warwick

the Kingmaker until he was 16. When conflict broke out again in 1469, Richard remained loyal to Edward IV and joined him in exile. During Edward's restoration campaign Richard was wounded at Barnet and commanded the Yorkist left flank at the Battle of Tewkesbury.

Tewkesbury established Richard's martial reputation, but when Edward IV died in 1483 his loyalty did not extend to his nephew Edward V. Richard claimed the throne for himself and Edward, along with his younger brother, permanently disappeared within the Tower of London. The usurper king put down a rebellion by the Duke of Buckingham in 1483, but Richard was soon undone when Henry Tudor, Earl of Richmond invaded England.

Despite outnumbering Richmond's largely mercenary army, Richard received no loyalty from the Stanley family, whose force defected at the Battle of Bosworth in August 1485. Richard personally led a cavalry charge to kill Henry but he was unhorsed and killed. Even later Tudor propagandists agreed that Richard fought with great courage.

Although Richard III is an extremely controversial king, his military experience and courageous death in battle has never been doubted, even by his most ardent critics



HENRY VII

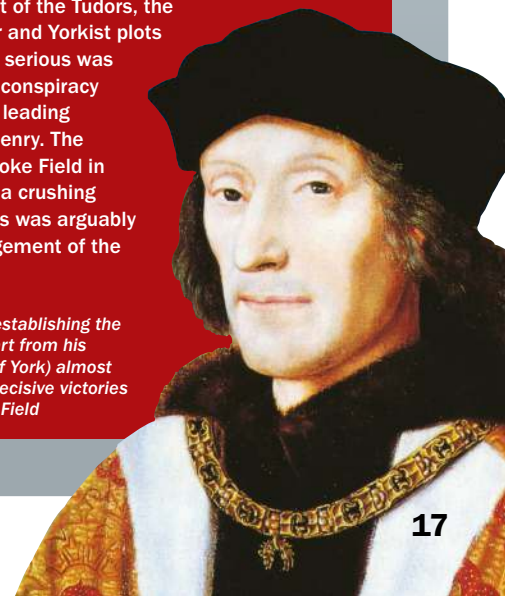
THE UNLIKELY KING WHO ENDED THE WARS OF THE ROSES AND FOUNDED A FAMOUS DYNASTY 1457-1509 LANCASTRIAN-TUDOR

Henry Tudor, Earl of Richmond's claim to the English throne was tenuous. Born in Wales to a recently ennobled Welsh family, Tudor's Plantagenet blood came through an illegitimate female line. When Henry VI was murdered in 1471, Richmond suddenly became the last surviving male heir to the Lancastrian cause but spent years living in exile in Brittany.

When Richard III became king in highly controversial circumstances, Richmond saw his chance and invaded England after landing in Wales. At the Battle of Bosworth, Richmond was almost killed by Richard, but the timely defection of his stepfather Thomas, Lord Stanley led to the death of the Yorkist king and an unexpected success. Richmond was crowned Henry VII on the battlefield.

Despite the ascent of the Tudors, the fighting was not over and Yorkist plots continued. The most serious was the Lambert Simnel conspiracy that was hatched by leading Yorkists to depose Henry. The resulting battle of Stoke Field in June 1487 ended in a crushing victory for Henry. This was arguably the last major engagement of the Wars of the Roses.

Henry VII's success in establishing the Tudor dynasty was (apart from his marriage to Elizabeth of York) almost totally because of his decisive victories at Bosworth and Stoke Field

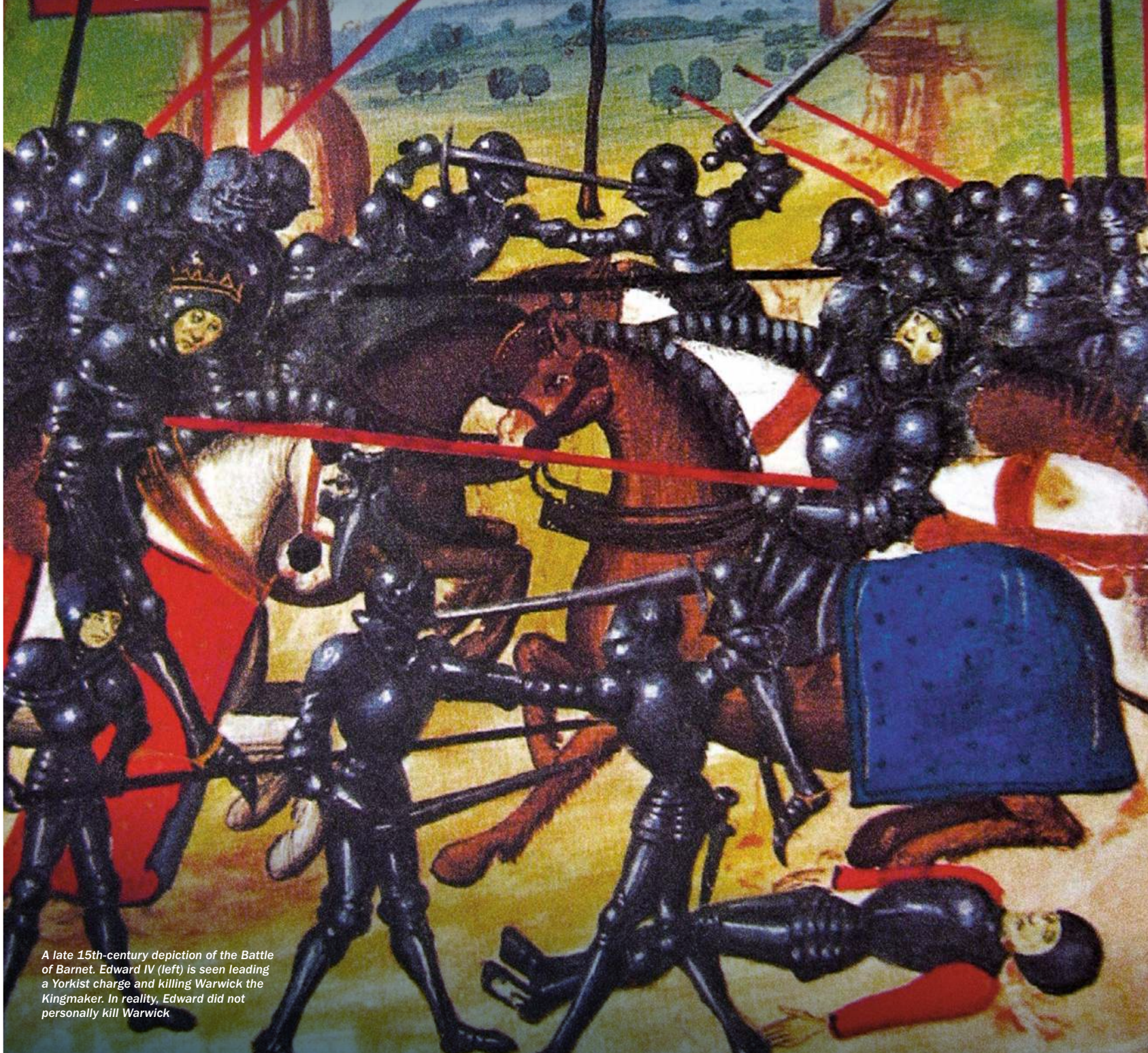




Frontline

FAMOUS BATTLE BARNET 1471

Edward IV struck a decisive blow against his former ally Warwick the Kingmaker in a misty battle that reinforced Yorkist power in England



A late 15th-century depiction of the Battle of Barnet. Edward IV (left) is seen leading a Yorkist charge and killing Warwick the Kingmaker. In reality, Edward did not personally kill Warwick

By 1469 Edward IV and his most powerful ally, Richard Neville, Earl of Warwick, were in opposition. Warwick was largely responsible for placing the Yorkists on the throne, but Edward made himself unpopular by marrying Elizabeth Woodville, whose family were bitterly opposed to Warwick. Open warfare finally broke out, with Warwick defeating Edward's forces at the Battle of Edgecote Moor in July 1469, although the king himself was not actually present.

An uneasy truce was established, but relations soon broke down and Edward fled to Flanders in 1470 despite winning a victory against Warwick's supporters at Losecoat Field. Warwick then acted as 'kingmaker' once again and restored the Lancastrian Henry VI. Edward retaliated by landing in Yorkshire and outmanoeuvred Warwick by taking London and capturing Henry. In this highly charged situation, Warwick offered battle to Edward 16 kilometres (ten miles) outside London near High Barnet in Hertfordshire.

Edward arrived at Barnet at dusk on 13 April 1471, and his army collided with Warwick's picket lines. To sap Lancastrian morale, Edward brought the unfortunate Henry VI with him and held the rival monarch in reserve. The king hoped to launch a surprise dawn attack, and the Yorkists encamped in battle lines "passing great silence all the night whereby the enemy might not know where they lay". In the darkness Warwick ordered a night bombardment against the Yorkists, but his gunners overshot the enemy lines as "the king's host lay much nearer than they deemed".

The fog of war

At dawn on 14 April 1471 the two armies were positioned in a mist that was heavy with the whiff of gunpowder. Warwick commanded

"THE KING'S EXPERIENCE AND IMPOSING PHYSIQUE MADE HIM AN IMPRESSIVE FOCUS FOR HIS MEN"

15,000 men compared to Edward's 10,000 and both sides formed into three divisions, known as 'battles'. Both armies were confused by the fog, which was not helped by opposing heraldry: Edward's men wore the badge of the sun while the Lancastrian troops under John de Vere, Earl of Oxford wore a similar badge of a radiant star.

The Yorkists first advanced under Lord Hastings on the left flank through the fog but were soon attacked by Oxford's archers and artillery. The Yorkists faltered, and Oxford successfully charged Hastings's men and put them to flight. On the right flank Edward's youngest brother Richard, Duke of Gloucester failed to find the Lancastrian duke of Exeter's men in the fog, but this mistake proved to be a blessing. Gloucester swung around Warwick's extreme left instead and put increasing pressure on the Lancastrians.

While Gloucester was fighting on his right, Edward personally led his men in the centre. The king's experience and imposing physique made him an impressive focus for his men. The Yorkist thrust now squeezed Warwick from two directions, but the Lancastrians did not initially break. Warwick's left wing began to buckle, and the formation of the battle spun anticlockwise until the Lancastrians were pushed into an area called Dead Man's Bottom. Opposing billmen engaged in hand-to-hand combat and the battle turned into a bloodbath.

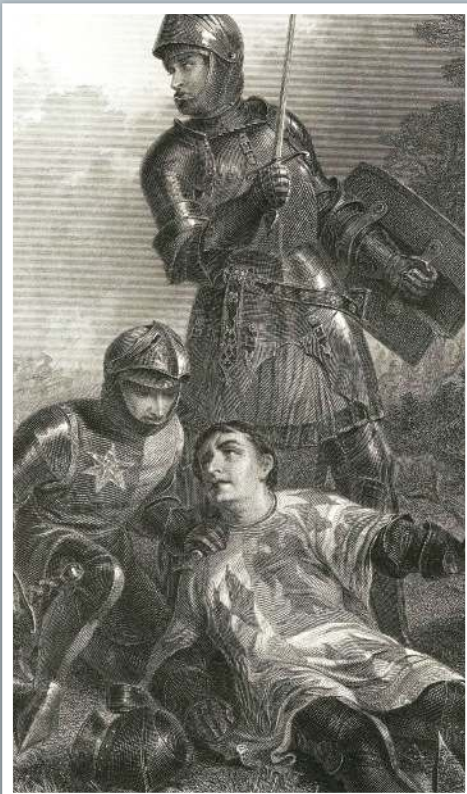
Death of the Kingmaker

After routing Hastings's attack, Oxford's men left the field and turned to looting. Oxford was only able to rally 500 cavalymen to return to the battle. Warwick and Oxford then confused each other for the enemy in the mist. Warwick's men accidentally attacked their comrades with Oxford's troops shouting, "Treason! Treason!"

While the Lancastrians inadvertently fought themselves, Edward committed his reserves to the battle, which further pushed Warwick's centre back. Warwick attempted to rally his troops by crying, "This is our last resource. If we withstand this charge the day be ours." This optimistic rallying cry went unheeded and the Lancastrians disintegrated and fled. Warwick was recognised as he tried to recover his horse and was attacked by Yorkist men-at-arms. The earl fought alone until he was knocked to the ground and killed. The once mighty 'Kingmaker' was dead.

Edward IV had comprehensively defeated his most powerful enemy and former ally at Barnet. The battle lasted between two to three hours and thousands of men were killed, although the exact figure is not known. The Yorkist king went on to destroy the final remnants of Lancastrian resistance at Tewkesbury only weeks later, and his rule was finally secured.

Left: Warwick the Kingmaker's death as depicted in William Shakespeare's *Henry VI, Part III*. In reality, Warwick died alone surrounded by Yorkist men-at-arms



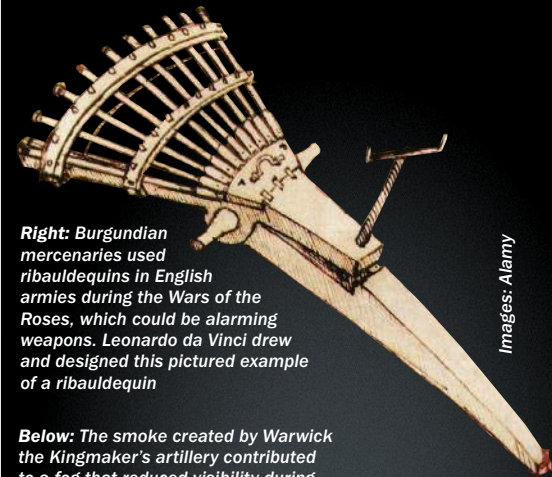
ARTILLERY OF THE ROSES

GUNS PLAYED A VISIBLE ROLE ON THE BATTLEFIELD BETWEEN 1455-87 AND WERE HIGHLY PRIZED BY LANCASTRIAN AND YORKIST KINGS

During the Wars of the Roses both sides had small artillery forces, and on the battlefield light field pieces were attached to infantry regiments. There were various sizes of guns, the most ideal being a 'saker'. This fired a six-pound iron ball up to 2,300 metres (2,500 yards) and could fire case shot at close range. There were also 'handguns' that were similar to early muskets and even 'ribauldequins', which were multi-barrel weapons. Despite their power, the guns had slow loading times and limited accuracy, so their most fearsome asset was primarily psychological.

Artillery played a unique part in several battles. At the Battle of Barnet, Warwick the Kingmaker continuously bombarded the Yorkists at night, but the resulting smoke contributed to dangerously foggy conditions during the battle the following day. During the Battle of Tewkesbury, Edward IV drew the Lancastrians out of their defensive position with an artillery salvo, while Richard III mingled 'handgunners' among his archers at the Battle of Bosworth.

Although they were relatively crude weapons, kings valued their artillery. Henry VI paid for guns and powder at his own expense and appointed an ambitious 'master of ordnance' who was killed by Yorkists in 1460 for expanding the Lancastrian artillery. Edward IV's masters of ordnance were trusted members of his household, and he regularly inspected his artillery trains. By the time Henry VII became king in 1485 the English Crown had a sizeable collection of guns that were housed in the Tower of London.



Right: Burgundian mercenaries used ribauldequins in English armies during the Wars of the Roses, which could be alarming weapons. Leonardo da Vinci drew and designed this pictured example of a ribauldequin

Images: Alamy

Below: The smoke created by Warwick the Kingmaker's artillery contributed to a fog that reduced visibility during the Battle of Barnet



A NATION TORN IN TWO

Contrary to popular belief, the Wars of the Roses did not stay confined to fighting in Yorkshire and Lancashire but were fought across England and Wales

1 BATTLE OF WAKEFIELD WAKEFIELD, WEST YORKSHIRE 30 DECEMBER 1460

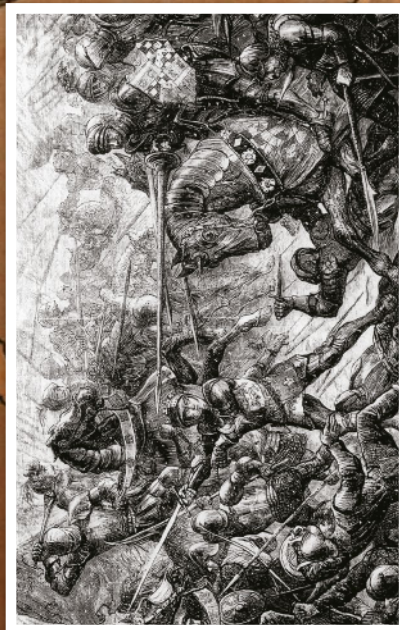
Richard, Duke of York travels north to intercept a Lancastrian force in Yorkshire. The duke takes a defensive position at Sandal Castle outside Wakefield but suddenly leaves and attacks the numerically superior Lancastrian army. York is defeated and killed, which is a severe blow to the Yorkist cause.

2 BATTLE OF MORTIMER'S CROSS WIGMORE, HEREFORDSHIRE 2 FEBRUARY 1461

Edward, Earl of March succeeds his father as duke of York and moves to defeat a Lancastrian army in Wales. At Mortimer's Cross, the largely mercenary Lancastrian army is routed by Edward, who proceeds to link up with his powerful ally Richard, Earl of Warwick. Edward is crowned Edward IV within two months.

3 BATTLE OF TOWTON TOWTON, NORTH YORKSHIRE 29 MARCH 1461

Edward IV decisively defeats one the largest Lancastrian armies of the wars at Towton shortly after his coronation. Tens of thousands of men fight for hours in a snowstorm, and the Yorkists are saved from defeat by timely reinforcements. The battle turns into a horrific massacre, and the Lancastrians are crushed for almost a decade.



Historians believe that Edward IV's courage and leadership at Towton was at least partially responsible for the Yorkist victory

SIEGE OF BAMBURGH CASTLE BAMBURGH, NORTHUMBERLAND JUNE-JULY 1464

1

BATTLE OF HEDGELEY MOOR HEDGELEY MOOR, NORTHUMBERLAND 25 APRIL 1464

BATTLE OF HEXHAM HEXHAM, NORTHUMBERLAND 15 MAY 1464

BATTLE OF FERRYBRIDGE FERRYBRIDGE, WEST YORKSHIRE 28 MARCH 1461

3

BATTLE OF BLORE HEATH BLORE HEATH, STAFFORDSHIRE 23 SEPTEMBER 1459

BATTLE OF WORKSOP WORKSOP, NOTTINGHAMSHIRE 16 DECEMBER 1460

9

6 THE PRINCES IN THE TOWER TOWER OF LONDON APRIL-JULY 1483

Following Edward IV's death, his 12 year-old heir is proclaimed Edward V. However, Richard, Duke of Gloucester intercepts his nephew and lodges him in the Tower of London along with Edward's younger brother Richard, Duke of York. The two royal children are never seen again, and Gloucester is crowned Richard III.

7 BUCKINGHAM'S REBELLION ENGLAND AND WALES OCTOBER-NOVEMBER 1483

Henry Stafford, Duke of Buckingham rebels against his former master Richard III. Small rebellions break out across England and Wales while Henry Tudor attempts to sail with a force from Brittany. The rebellion is crushed and Buckingham is executed.



Buckingham fails to cross the River Severn to link up with supporters for his rebellion. Richard III famously called his former ally "the most untrue creature living"

4 BATTLE OF TEWKESBURY TEWKESBURY, GLOUCESTERSHIRE 4 MAY 1471

Tewkesbury is the last major gasp of Lancastrian resistance to Edward IV's rule. Led by the duke of Somerset, the Lancastrians set up a defensive position and are attacked by Edward IV's army. After an ill-judged Lancastrian counterattack, the Yorkists win a complete victory that ends the dynastic conflict for over a decade.



The Tower of London was England's most formidable fortress during the Middle Ages and was the scene of the murders of both Henry VI and Edward V during the Wars of the Roses

SIEGE OF HARLECH CASTLE HARLECH, GWYNEDD 1461-68

2

STAFFORD AND LOVELL REBELLION WORCESTERSHIRE APRIL-MAY 1486

4

BATTLE OF LUDFORD BRIDGE LUDLOW, SHROPSHIRE 12 OCTOBER 1459

8

BATTLE OF LOSECOAT FIELD EMPINGHAM, RUTLAND 12 MARCH 1470

BATTLE OF NORTHAMPTON NORTHAMPTON, NORTHAMPTONSHIRE 10 JULY 1460

FIRST BATTLE OF ST ALBANS ST ALBANS, HERTFORDSHIRE 22 MAY 1455

SECOND BATTLE OF ST ALBANS ST ALBANS, HERTFORDSHIRE 17 FEBRUARY 1461

BATTLE OF BARNET BARNET, HERTFORDSHIRE 14 APRIL 1471

The execution of Edmund Beaufort, Duke of Somerset after the Battle of Tewkesbury. The Lancastrians also lost Edward of Westminster, Prince of Wales, who was killed during the battle, and Queen Margaret of Anjou was captured

5

6

BATTLE OF EDGEWORTH MOOR CHIPPING WARDEN AND EDGEWORTH, NORTHAMPTONSHIRE 26 JULY 1469

1

5 MURDER OF HENRY VI TOWER OF LONDON 21 MAY 1471

The former Lancastrian king is murdered in the Tower of London following the Battle of Tewkesbury. The order is almost certainly given by Edward IV, and his brother Richard, Duke of Gloucester is present within the Tower on the night of Henry VI's death. His body is displayed in St Paul's Cathedral the following evening and apparently bleeds on the pavement.

8 BATTLE OF BOSWORTH NEAR AMBION HILL, LEICESTERSHIRE 22 AUGUST 1485

Henry Tudor, Earl of Richmond leads a largely mercenary army from Wales into England. Richard III intercepts him south of Market Bosworth and battle is struck. A force commanded by the Stanley family defects to Richmond. Richard is brutally killed and Richmond becomes Henry VII.

9 BATTLE OF STOKE FIELD EAST STOKE, NOTTINGHAMSHIRE 16 JUNE 1487

Yorkist loyalists seek to overthrow the new Tudor dynasty by using a pretender, Lambert Simnel, to impersonate the imprisoned earl of Warwick. Simnel is crowned as 'Edward VI' in Dublin, but Henry VII crushes an army of Irish and German mercenaries at Stoke Field, and the last significant Yorkist faction is destroyed.

"THE ORDER IS ALMOST CERTAINLY GIVEN BY EDWARD IV, AND HIS BROTHER RICHARD, DUKE OF GLOUCESTER IS PRESENT WITHIN THE TOWER ON THE NIGHT OF HENRY VI'S DEATH"



Frontline

RICHARD III'S LAST STAND

The discovery of the king's skeleton in 2012 shed new light on his brutal final moments at the Battle of Bosworth

Richard III as he might have appeared after he was dismounted during fighting at the Battle of Bosworth. The king's face and posture are both based on his skeleton that reflect a facial reconstruction and an analysis of his scoliosis spinal condition. At this stage Richard hadn't lost his distinctive helmeted crown, but this striking symbol of his kingship would have certainly marked him out to his enemies.

On 22 August 1485 the course of English history changed forever at the Battle of Bosworth in Leicestershire. The battlefield death of Richard III was the end of many things: he was the last Yorkist and Plantagenet king and the final English monarch to be killed in battle. Although Stoke Field was the last major battle of the Wars of the Roses, Bosworth was the decisive blow that permanently crippled the Yorkist cause and catapulted the Tudors to power under the victorious Henry VII.

“A bold and most valiant prince”

Richard’s maligned and deeply controversial reputation has its roots in subsequent Tudor propaganda, but even hostile historians could not deny his bravery at Bosworth. By the time of his death, Richard had lost his horse and helmet and fought alone. He had been offered a horse to escape, but a Spanish account recorded that he said, “God forbid that I retreat one step. I will either win the battle as a king – or die as one.”

Polydore Vergil, an Italian historian at Henry VII’s court, also confirmed Richard’s defiance, “that he would either make an end of war or of life” for “such was the great fierceness and force of his mind”. Vergil then stated that Richard fought and died in the “thickest press of his enemies”, while the contemporary historian John Rous said, “[Richard] bore himself as a gallant knight and acted with distinction as his own champion until his last breath.”

The Croyland Chronicle, which was otherwise implacably opposed to Richard, unambiguously praised his last moments, “For in the thick of the fight, and not in an act of flight, King Richard fell in the field, struck by many mortal wounds – as a bold and most valiant prince.”

The newly crowned Henry VII ordered Richard’s body to be stripped and flung naked over a horse before it was paraded to Leicester. What happened to his body afterwards became an unsolved mystery until a remarkable discovery shed more light on how Richard was killed.

An archaeological miracle

In 2012 an archaeological excavation uncovered a skeleton in Leicester underneath a car park where the lost Greyfriars Church once stood. In one of the most extraordinary

A fascinating by-product of the discovery of Richard III’s skeleton was a facial reconstruction from his skull. Richard’s appearance had remarkable similarities to near-contemporary portraits of him



Left: Contemporary historians like John Rous condemned Richard III’s reign after his death, but none could deny his courageous fighting at Bosworth

historical discoveries of modern times, DNA tests confirmed that the skeletal remains belonged to none other than Richard III himself.

The king had been unceremoniously buried in a hastily dug grave that was too short, with no evidence of a coffin, shroud or clothes, which fitted historical accounts. It was discovered that Richard stood at 1.74 metres (five feet eight inches) tall and, most astonishingly, suffered from severe scoliosis (curvature of the spine). This would have lifted his right shoulder higher than his left and partially confirmed the Shakespearean popular view that Richard was hunchbacked. Nonetheless, the king’s spinal condition would not necessarily have been too physically noticeable or hindered his movement.

Richard’s slight disability certainly did not hinder his ability to vigorously fight in armour, and the accounts of his isolated last stand were seemingly confirmed by the injuries on his skeleton. At least 11 injuries were identified,

“ACCOUNTS OF HIS ISOLATED LAST STAND WERE SEEMINGLY CONFIRMED BY THE INJURIES ON HIS SKELETON”

Richard III’s skeleton revealed that he suffered from a curved spine thanks to severe scoliosis. This remarkable discovery added a certain amount of fact to the Shakespearean legend of the “hunch-back’d” king

mostly located on his skull, although there were others on his ribs and pelvis.

The wounds on the skull were created by sharp, bladed weapons including a dagger and sword. The largest fatal wound was a hole underneath the back of the skull. Although the weapon responsible could not be proved, it was consistent with a halberd, which was a combined spear and battleaxe. Another mortal injury was a wound on the left base of the skull where a bladed weapon cut through the bone, penetrating 10.5 centimetres (4.1 inches) in.

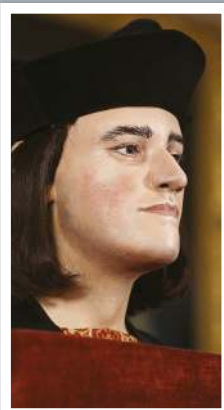
These head wounds matched contemporary accounts, which agreed that Richard was killed by one or multiple blows to the head. Some claimed that his killers were Welsh infantrymen armed with halberds, and the evidence suggests that he was killed by more than one person in a series of violent attacks. The fact that the vast majority of his injuries were on his skull indicates that Richard lost his helmet at some point during the battle or had it forcibly removed. He may have been struck elsewhere on his body, but it appeared that he was still wearing body armour at the time of his death.

One interesting aspect of his injuries was that some of them would have been difficult to inflict if Richard were wearing his armour. One wound was a stab through the buttocks, which may have been a deliberate assault on his body after he was killed. If Richard had been stripped and paraded on horseback after his death it would have been easy for one of Henry VII’s soldiers to inflict a final, humiliating blow on the dead king.

A desperate last stand

Richard III’s skeleton revealed new clues about the king’s last moments and proved what a horrific death he suffered. During the closing stages of the battle it appears that the defeated Richard found himself surrounded by enemies and received two wounds to the chin, where his helmet straps were presumably cut open and the headgear thrown away. Richard fought on but his head was now exposed to repeated blows. A dagger may have punctured his head and brought him to his knees before a fatal blow from a halberd cut through his skull. With Richard on the ground, a sword was then thrust through his head. It was an extremely violent end for the last Plantagenet king and the official termination of medieval England.

Richard III’s skeleton was found in a car park on the site of the former Greyfriars Church in Leicester in 2012. It was one of the most remarkable archaeological discoveries of recent times





THE WHITE ROSE & THE TUDORS

The Wars of the Roses did not end in 1485, but continued into the reign of Henry VII with a series of failed rebellions and battles to restore the Yorkists to the English throne

It is commonly assumed that the Battle of Bosworth was the decisive end of the Wars of the Roses. Richard III's death was the end not just of the Yorkist dynasty but the line of Plantagenet kings who had ruled England since 1154. Henry VII's battlefield coronation was a hugely symbolic act to celebrate the improbable rise of the Tudors. William Shakespeare had Thomas,

Lord Stanley offer the crown with the words, "Wear it, enjoy it and make much of it" but this is a dramatic statement of stability that does not reflect the historical reality.

Henry was only king by right of conquest, and his Lancastrian claim to the throne came from a maternal, illegitimate line. A contemporary historian, Polydore Vergil, explained, "For all his high words about his just title, it was in fact as

shaky as can be without being non-existent. From the start [Henry VII] was threatened with plots by fresh opponents. He had to cope with armed uprisings by enemies who were also his subjects, surviving with difficulty."

Henry's followers were mostly ex-Yorkists who were outraged by Richard III's actions, and Henry was merely their 'pretender'. Therefore, if he displeased them they would find another

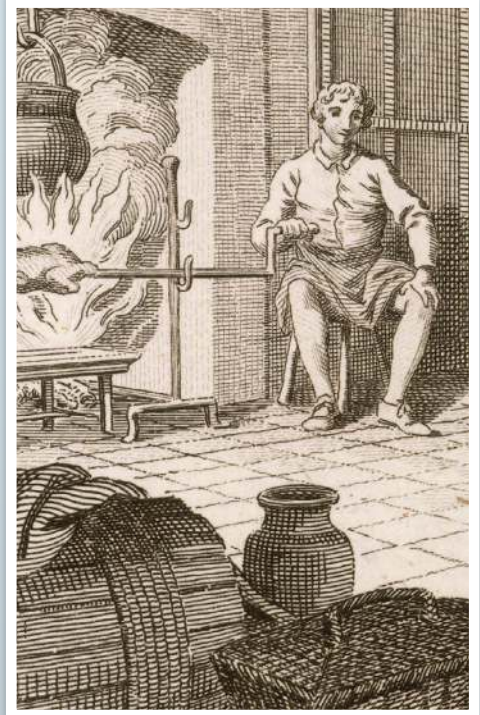


“FOR ALL HIS HIGH WORDS ABOUT HIS JUST TITLE, IT WAS IN FACT AS SHAKY AS CAN BE WITHOUT BEING NON-EXISTENT. FROM THE START [HENRY VII] WAS THREATENED WITH PLOTS BY FRESH OPPONENTS. HE HAD TO COPE WITH ARMED UPRISINGS BY ENEMIES WHO WERE ALSO HIS SUBJECTS, SURVIVING WITH DIFFICULTY”

Contemporary historian
Polydore Vergil



Above: Perkin Warbeck was a determined imposter who claimed to be Richard, Duke of York



Above: Lambert Simnel was pardoned by Henry VII and was sent to work in the royal kitchens

to replace him. This movement became known as the 'White Rose' and over the course of Henry's reign they would find two major pretenders called Lambert Simnel and Perkin Warbeck to attempt to overthrow him.

A revolt first occurred in 1486 when Lord Lovell and Sir Humphrey Stafford rebelled against Henry. The revolt was quickly suppressed, but support grew for Richard III's imprisoned nephew and heir Edward, Earl of Warwick. An Oxford priest decided to pass off a young, intelligent boy called Lambert Simnel as Warwick, and the pair travelled to pro-Yorkist Ireland. The lord deputy of Ireland supported Simnel and he was crowned as 'Edward VI' in Dublin. Meanwhile, John de la Pole, Earl of Lincoln (who was another nephew of Richard III) defected to Simnel and brought 2,000 German mercenaries commanded by Colonel Martin Schwartz to Ireland.

The Irish raised another 4,000-5,000 troops and Lincoln's force invaded England in June 1487. Lincoln found some support from northern English earls, and the Yorkist army grew to 8,000-10,000 men. Henry advanced with approximately 12,000 men and met Lincoln in battle at Stoke Field in Nottinghamshire on 16 June 1487.

The battle was a hard-fought affair that was probably larger in scale than Bosworth, and certainly with more casualties. Henry did not take part in the fighting and left command to John de Vere, Earl of Oxford. The Irish levies and German mercenaries fought unexpectedly hard against Henry's troops, and for a while the battle hung in the balance. Oxford's archers eventually caused heavy casualties among the lightly

armed Irish soldiers, and although Schwartz's German pikemen were heavily armoured and fought with great bravery they were also cut down. Around 4,000 men were killed, including Lincoln and Schwartz. Simnel was captured but pardoned by Henry, who sent him to work in the royal kitchens.

Stoke Field was the last large-scale battle of the Wars of the Roses, but Henry faced another pretender during the 1490s called Perkin Warbeck. Warbeck was Flemish but claimed he was Richard, Duke of York, one of the missing 'Princes in the Tower'. Warbeck was officially recognised by James IV of Scotland, and they briefly invaded northern England in September 1496. Warbeck then landed in Cornwall in September 1497, where the Cornish proclaimed him king. A Milanese diplomat recorded that "8,000 peasants immediately took up arms for him" and the Cornish besieged Exeter. The attack failed, leaving hundreds dead, and Warbeck fled to Beaulieu Abbey, where he surrendered. Warbeck subsequently revealed his true identity to Henry and attempted to escape the Tower of London twice, before he and the long-imprisoned Edward, Earl of Warwick were executed in November 1499.

The Cornish uprising of 1497 was the last full Yorkist rebellion against Henry VII's rule. The fact that it occurred a full 12 years after Bosworth was proof that the Yorkist cause was still a threat to the Tudor regime. Even Henry VIII, whose maternal grandfather was the Yorkist Edward IV, lived in fear of White Rose plots, and this was still evident in the 1540s. The last horrible act of the Wars of the Roses arguably occurred on 27 May 1541 when the elderly Margaret Pole, Countess of Salisbury was executed on no grounds. Salisbury's only 'crime' was that she was the niece of Edward IV and therefore one of the few surviving Yorkist Plantagenets. Such was the legacy of a bitter dynastic war.

The last stand of Colonel Martin Schwartz and his German mercenaries at the Battle of Stoke Field. This victory for Henry VII was the last major battle of the Wars of the Roses



LANCASTERS OVER EUROPE

AN INTERVIEW WITH RUSSELL 'RUSTY' WAUGHMAN DFC, AFC

WORDS TOM GARNER

Rusty Waughman flew Lancaster bombers and miraculously survived 30 missions over some of the deadliest skies of World War II

The RAF's bombing offensive against Nazi Germany was one of the longest, most expensive and most controversial of the Allied World War II campaigns. Its aim was to severely weaken Germany's ability to fight, which was strategically vital for victory. This effort came at a huge price, with 55,573 airmen of Bomber Command losing their lives – a death rate of 44.4 per cent. The men were mostly very young and from many nationalities.

For those who survived, Bomber Command's reputation was widely debated in later years but victory in Europe could not have been achieved without its relentless efforts to divert German

forces to defend its airspace. Field Marshal Erwin Rommel even despairingly remarked, "Stop the bombers or we can't win!" Whatever the debate, Bomber Command was crewed by courageous airmen who repeatedly risked their lives in extremely dangerous conditions. Among them was Russell 'Rusty' Waughman who flew 30 missions as a Lancaster bomber pilot in 101 (Special Duties) Squadron. Now aged 95, Waughman describes in vivid detail how he survived everything from enemy flak and fighters to a mid-air collision.

Canadian training

Born in 1923, Waughman had a difficult childhood where he suffered many illnesses, but he was determined to join the British armed forces. "At the age of 17 I volunteered to join the navy mainly because Dad got himself a DSM as a leading seaman during World War I and I thought I was keeping up the family tradition," he said. Waughman's attempts to volunteer were roundly dismissed, which led to him joining the RAF. "When I told Mum and Dad I was going to volunteer they said, 'You'll never get in with your health record.' I went down to the recruiting centre to join the navy, but the recruiting officer was my own doctor so I went next door and joined the RAF. I was very surprised I was accepted and poor old Mum wept buckets."

Waughman travelled to Canada and initially trained on Tiger Moth and Stearman aircraft at



Left: Rusty Waughman now talks regularly to schoolchildren and at events about his experiences flying in Bomber Command during World War II



Left: Airmen of 101 Squadron filling thermos flasks after a briefing before a raid on Berlin in early 1944. Waughman is pictured in the centre taking the top off his flask. The blanked out part of the photograph was a map of Europe that was eliminated for security reasons



Right: Waughman seated in the cockpit of his second Lancaster LL757 'Oor Wullie' with flight engineer Curly Ormerod standing up through the window

**"VICTORY IN EUROPE
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'STOP THE BOMBERS OR
WE CAN'T WIN!'"**

Avro Lancasters were the RAF's most effective heavy bombers. Waughman flew two of these aircraft during World War II

Image: Peter van Stigt

De Winton Aerodrome near Calgary. Towards the end of this training he was given a choice: "I took to flying quite naturally, but at the end of the course they asked what we wanted to join: Bomber or Fighter Command? Of course you can imagine about 99 per cent of us said Fighter Command so I was sent to Bomber Command!"

Now training on the Airspeed Oxford on the Canadian prairies, Waughman experienced an incident of bird strike. "We did a bit of low flying over a lake, which we shouldn't have done, and flew through a flock of geese. We had these geese wrapped round the aeroplane and they broke the Perspex. I was sitting in the navigator's seat and had a wet duck wrapped round my face! We managed to get back but that experience helped us during the war because similar things happened."

Piloting the Lancaster

Waughman had now gained his 'wings' and continued training in England on Wellington and Halifax bombers before finally converting to the Avro Lancaster at a finishing school. He described the aircraft as "a different aeroplane altogether. It wasn't easy to get in and out of and you had to get into your seat sitting on the parachute. However, it responded and really was a remarkable aeroplane. Right from the very beginning you gelled with the thing."

Nevertheless, flight training was highly dangerous. "Unfortunately, the aircraft we were learning on had been withdrawn as unfit for operational flying. Consequently, the casualty

Above: Rusty Waughman's fellow pilot and friend Paul Zanchi joined 101 Squadron shortly before Waughman. Zanchi and the majority of his Lancaster crew were tragically killed on 26 November 1943 shortly before Waughman arrived on the 28th

rate for learning to fly in Bomber Command was 25 per cent, mainly through engine failures or people getting lost on cross-country exercises."

Waughman became a fully qualified heavy bomber pilot and aimed to join 101 (Special Duties) Squadron with his friend Paul Zanchi. "Paul went and joined 101 Squadron and when my turn came a few days later I asked the flight commander if I could join him. He said, 'It's a special duty squadron, we only send the best ones there', but a couple of days later he



Above: Waughman was commissioned as a pilot officer on 6 February 1944 and flew Dakotas during the Berlin Airlift, before retiring from the RAF as a flight lieutenant

said, '101 Squadron: off you go.' I said, 'Oh, change of assessment?' but he replied, 'No, it's the squadron with the highest attrition rate in the service and you got the first call on the availability of aircrew.'"

The flight commander's ominous statement was tragically fulfilled when Waughman joined 101 Squadron on 28 November 1943 at RAF Ludford Magna in Lincolnshire. "The day I arrived on the squadron my friend Paul had been shot down and killed the night before, so I never did see him again. Then you started to realise that it's tough, people shoot at you and it's not fair."

'Special Duties'

Waughman would serve with 101 Squadron for a complete tour of operations between 28 November 1943 and 26 June 1944 and collected most of his Lancaster crew before

"THE DAY I ARRIVED ON THE SQUADRON MY FRIEND PAUL HAD BEEN SHOT DOWN AND KILLED THE NIGHT BEFORE, SO I NEVER DID SEE HIM AGAIN. THEN YOU STARTED TO REALISE THAT IT'S TOUGH, PEOPLE SHOOT AT YOU AND IT'S NOT FAIR"



Aircrew waiting for the 'off' to go on a bombing mission after a main briefing, February 1944. 101 Squadron flew more raids than any other Bomber Command unit but 1,176 of its airmen were killed



Catering staff from RAF Ludford Magna prepare flying rations for aircrews of 101 Squadron, including Waughman's. Missions could last as long as eight hours



A rear gunner of 101 Squadron is helped into his heated suit before a mission. Temperatures were frequently below freezing at high altitudes in Lancaster bombers

WAUGHMAN'S 'BAND OF BROTHERS'

RUSTY WAUGHMAN COMMANDED A CLOSE-KNIT CREW WHO HELPED EACH OTHER SURVIVE – THEY ARE STILL FRIENDS TODAY

Waughman commanded the same basic crew of seven airmen plus a special duty operator in two Lancaster bombers between 1943-44. The crew became very close friends and worked as one to survive. "We all became a big band of brothers and we just gelled, it really was a wonderful crew. I was responsible for the aircraft but on operations the crew were telling you what to do. The rear gunner would shout, 'Dive starboard, go!' when we were being attacked, and if you asked why it was too bloody late – you'd be shot down. So you had to obey and do what the crew suggested. You had the

final decision to make, but you were just another crewmember."

Waughman was awarded the DFC for completing 30 missions but felt it should have been a shared award: "I look upon it as a crew medal. It wasn't just mine because at the end of a tour the skippers got decorations but the crew didn't get anything."

Four of the eight crewmembers – Alec Cowan, John Ormerod, Norman Westby and Waughman himself – are still alive as of February 2018. As Waughman touchingly said, "You had many good friends, which I am lucky enough to still have now."

Waughman's second Lancaster bomber LL757 'Oor Wullie' pictured while being serviced at Ludford Magna, May 1944. Waughman is in the cockpit and two ABC transmitter aerials are visible on top of the fuselage



NORMAN 'BABE' WESTBY

BOMB AIMER

"Norman started life in a gypsy caravan around Manchester but now lives in Andorra, and we still keep in touch."



EDWARD 'TED' MANNERS

SPECIAL DUTIES OPERATOR

"We had Ted in later days who worked the ABC equipment. He sat down the back in the dark all the time and never saw daylight at all."



HARRY 'TIGER' NUNN

REAR GUNNER

"Harry was a wonderful Canadian lad who volunteered to join the RAF. He saved our lives two or three times just through his diligence."



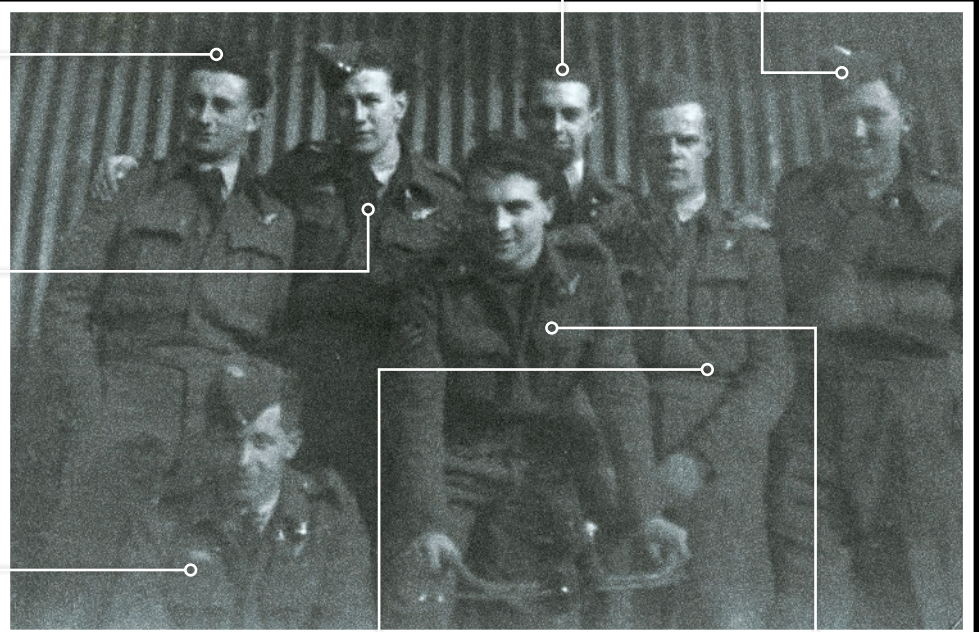
ALEC 'JUMBO' COWAN

NAVIGATOR

"Alec had just started work. He lied about his age and joined up when he was 16. He was a conscientious navigator and got us into places where even some of the main force couldn't go."



"WE ALL BECAME A BIG BAND OF BROTHERS AND WE JUST GELLED, IT REALLY WAS A WONDERFUL CREW"



THOMAS 'TOMMY' DEWSBURY

MID-UPPER GUNNER

"Tommy was the 'old man' of the crew. He was a council worker from Oldham and was 26 so he was quite old. I was the next oldest at 20 but all the rest were younger."



JOHN 'CURLY' ORMEROD

FLIGHT ENGINEER

"Curly was basically my 'first mate' and was an apprentice engineer for Rochdale Council aged 19."



IDRIS 'TAFFY' ARNELL

WIRELESS OPERATOR

"Taffy was a little rebel and a great tease. He was full of mischief and always swore he was going to come aboard drunk, but he was very conscientious and worked wonderfully."



he arrived at Ludford Magna. The squadron's 'Special Duties' brief was the carrying of a classified radio jamming system in each Lancaster, known as 'ABC' or 'Airborne Cigar'. RAF ground stations in southern England manned by German speakers could tune into enemy night fighter frequencies and either jam information or give false instructions. But the ground station's ABC range was only 210 kilometres (130 miles) and couldn't penetrate far into Europe to protect the bombers. Waughman explained, "An astute technician in Bomber Command said, 'Let's put it in an aeroplane.' 101 Squadron was given this equipment in 1943 and we had an extra crewmember working on it. He had a three-inch [7.6-centimetre] cathode ray tube, which could tune into the night fighter frequencies and get a strobe on a little screen. He'd cover that with the aircraft strobe, lock it on, decide that it was German speaking and then press another button, which blasted engine noise out on the frequency."

ABC was a valuable tool to protect other bombers, but 101 Squadron paid a heavy price for carrying it. "Our operators didn't have to speak German – it was purely jamming – but it was very effective. Consequently, our attrition rate was very high, mainly because we were used on every heavy bombing raid that went out. We acted as ordinary bombers too, staggered every 90 seconds throughout a bomber stream, which could be 60-70 miles [90-110 kilometres] long. That made us very vulnerable because we were using their

"IF YOU SAID YOU WEREN'T FRIGHTENED YOU WERE TELLING PORKIES. YOU BECAME A BIT ZOMBIE-ISH, YOU JUST HAD TO GET ON AND DO IT TO THE BEST OF YOUR ABILITY"

frequencies, but the German night fighter radar could hone onto our frequencies and aircraft very easily."

This hazardous task was daunting for rookie Lancaster crews and Waughman admitted, "My first operation was a disaster mainly because my first engineer couldn't cope and things went wrong. We lost part of our instruments and systems went wrong in the aircraft. I turned round and aborted the trip, which the boss wasn't very happy about. On the first five operations our casualty rate, mainly through inexperience, could be up to 40 per cent."

Battle of Berlin

The first few operations were a baptism of fire, as 101 Squadron took part in what became known as the Battle of Berlin. Between November 1943 and March 1944 the British bombed the German capital with 16 massed attacks and 9,112 sorties, but the RAF lost 495 aircraft and over 2,500 men killed.

Waughman recalled the intense loss of life and his own inexperience: "During the Battle of Berlin our attrition rate was up to 60 per cent. I didn't have any experience on operational flying at all. Normally when you went into a squadron

you did a couple of operations, as a pilot, with an experienced crew so you knew what it was like, but the Battle of Berlin was completely different. It was just, 'There's your aeroplane: off you go.'"

Flying over Berlin was "frightening. If you said you weren't frightened you were telling porkies. You became a bit zombie-ish, you just had to get on and do it to the best of your ability. It was a question of survival because on a bombing run you couldn't take evasive action at all. On our first successful Berlin raid you had fighter attacks over the Dutch coast and we were taking evasive action for over 30 minutes. There were two more attacks over the target, but you couldn't take evasive action. Then if you dropped the bombs you couldn't get the hell out. You had to fly for another 20-30 seconds because you took a photograph of where your bombs had burst. You were flying dead straight regardless of what was going on round about – including flak and fighters – and that was hairy." Attacks on Berlin were not just scary but long. "On a raid, you'd perhaps have about 50 per cent reasonably peaceful flying and 50 per cent panic. On the Berlin raids they were usually anything between 6-8 hours long."



“DURING THE BATTLE OF BERLIN OUR ATTRITION RATE WAS UP TO 60 PER CENT”

During attacks, Waughman had to avoid searchlights, fighters and flak. “You flew in a corkscrew pattern, diving down and climbing up to escape the fighters. You could be doing that for up to 30 minutes, and with a heavily loaded aircraft it was bloody hard work. Those periods on your flight were very hectic, and it was the same with the searchlights because the German radar was brilliant. They could put their night fighters into the bomber stream and even the anti-aircraft guns could attack an individual aircraft.”

Although the RAF failed to achieve its primary objective, in Berlin 50,000 buildings were destroyed and 80,000 documented civilians were killed. This carnage was not entirely planned, because Bomber Command’s targets had been largely industrial. “The industrial areas were selected out, and the pathfinders marked where you had to bomb, but the bombing equipment wasn’t 100 per cent efficient, so it was a direct hit on Germany and Berlin itself got a hell of a blasting.”

The Nuremberg Raid

Shortly after Berlin, Waughman survived a disastrous raid on Nuremberg on the

night of 30-31 March 1944. Bomber Command suffered its heaviest losses in a single night when 96 out of 795 aircraft (along with 545 aircrew) failed to return after being attacked by German night fighters. Waughman recalled receiving the battle orders with trepidation: “When the orders came up on the wall and you saw your name on it, the first thing you did was change your underwear.”

The raid was delayed twice, but when it happened Waughman’s Lancaster was staggered two-thirds of the way back through the bomber stream. The bombers had to fly 425 kilometres (265 miles) in a straight line across the southern Ruhr, but clear weather wreaked havoc. “The route was meant to be in cloud until the target, but freak winds blew the cloud away and so we were flying in a nearly half moon, which was more or less daylight. With our contrails it was almost sunny daylight on this 265-mile leg.”

16 aircraft were shot down by the time the bombers reached the German border. “It was quite alarming and we were concentrating all the time. We saw lots of fighter attacks. It only took an hour to fly this long leg, but in this hour 60 aircraft came down. That’s one a minute, and you saw these aircraft literally falling out of the sky. There was a little gap where the fighters went back and refuelled but they then sent more up. 17-18 aircraft were also shot down on their way home.”

Although Waughman’s Lancaster managed to reach Nuremberg, many did not and the damage

to the city was insignificant. When Waughman finally reached home the statistics were grim for 101 Squadron. “We sent 26 aircraft and lost seven. That’s 26 aircraft with 208 aircrew and we lost 56. That was just over a quarter of the squadron lost in one night.”

The raid had an exhausting psychological impact on the surviving airmen. “We were like zombies and just plain knackered. When you normally get back from a raid there’s a bit of banter and chatting going on but because we were concentrating so hard all the time the unwinding period was very difficult. We never spoke, which was quite unusual. When we got down to the mess for our post-op meal none of the girls or wives were there, they had all gone into a restroom and left the meals out with a little notice up saying, ‘Please help yourselves’. The lady mess sergeant said, ‘When you come in, all sit at the same table so you won’t see so many empty tables.’”

The grief had spread across the aerodrome. “The ladies had gone to the restroom crying because they were losing their friends. The staff were wonderful, so sympathetic. We went back to our billet and just sat on the bed and couldn’t sleep. Bomber Command didn’t operate fully for another fortnight after that.”

“Fear, panic and terror”

Throughout his time on operations Waughman had to contend with not just the enemy but also the elements. “We flew regardless of the weather and in some dreadful



The Avro Lancaster was the most famous and successful RAF heavy bomber of WWII. Waughman described it as “a remarkable aeroplane”



Rusty Waughman giving a two-finger salute as he boards his Lancaster. He attributed surviving 30 hazardous missions to "about 90 per cent luck, pure luck"



Inside Waughman's Lancaster: this view is taken from the navigator's position with Norman Westby at his bomb-aiming control panel in the nose of the aircraft

conditions. We flew through thunderstorms and you had ice and turbulence to contend with. You couldn't always dodge the thunderstorms and if you were struck by lightning – it didn't come inside but went around the aeroplane, and you got the smell of hot metal. The trailing aerial was burnt off a couple of times..."

These dangerous conditions meant that survival was the paramount thought. "On the first four operations you knew things were a bit dicky. Later on you just accepted it. You knew that your chances of survival were negligible because we were losing so many crews and you became fatalistic. One of the things we used to do was invoke the Grim Reaper and say that Death put his bony hand on your shoulder and said, 'Live child, I am coming'. When you lost a comrade you would drink his health in the mess and say, 'Here's to good old so and so and here's to the next one to die.'"

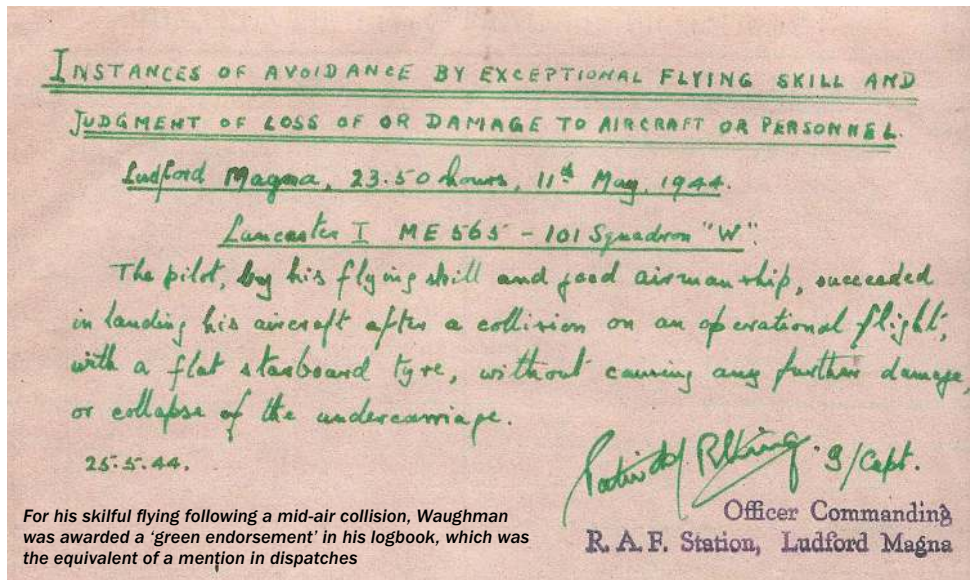
The mental strain on bomber airmen varied. "It affected some more than others. I think I was too thick: you knew what the risks were but some of the thinkers who really realised what was going on with the losses suffered quite a lot. The stress rate at Bomber Command was very high and I must admit I suffered afterwards. I didn't realise it but I developed a stress-induced stomach ulcer only a fortnight after I left the squadron."

Waughman expressed great appreciation for the station staff looking after the airmen. "They were wonderful people and didn't get the credit for what they did. I remember when I went to get my parachute one night one of the girls said, "Can I borrow your battle dress?" When it came back she had sewn a lucky threepenny piece onto it on the wings."

Throughout his missions Waughman maintained his professionalism, but he admitted he was not immune from experiencing pure fear on a raid over Essen on 26 April 1944: "We were flying into a huge box barrage and the flak was so thick you could get out and walk on it. It was really alarming and frightening. With the fighters and searchlights it looked impossible, and that's the first time I ever experienced fear, panic and terror. I dropped my seat so I couldn't see out and I was shaking. It felt as if needles were being pushed into my head."

Waughman went on, "For some unknown reason I said a little prayer, something I had never said since I was six years old... The fear and the panic disappeared. I don't know why but I got back on my seat and carried on perfectly alright. Although we experienced the same situations several times again on other raids, I never had that fear and panic again. It was quite strange."

"WE WERE FLYING INTO A HUGE BOX BARRAGE AND THE FLAK WAS SO THICK YOU COULD GET OUT AND WALK ON IT... IT LOOKED IMPOSSIBLE"



Barrel-rolling a Lancaster

On the night of 3-4 May 1944, 346 Lancasters attacked a German military camp at Mailly-le-Camp in France but were attacked by German fighters. 1,500 tons of bombs were dropped, causing considerable damage and casualties, but 42 Lancasters (11.6 per cent of the attacking force) were shot down with around 300 personnel.

Waughman was among this large bomber stream, when pathfinder problems contributed to the chaos. "The first raid was held up and the second raid caught up with the first, so there were nearly 400 bombers circling just by Reims. It just so happened that there were German night fighters stationed nearby and they got in amongst us and created mayhem."

Radio contact between other bombers was usually strictly forbidden but "on this night that disappeared completely. One lad called up and said, 'For Christ's sake pathfinders, pull your fingers out. I'm being shot at, I'm on fire,' but a very broad Australian voice came over the air saying, 'If you're going to die, die like a man.'"

When the call came to attack Mailly-le-Camp the bombers descended en masse, which resulted in great danger for Waughman. "It was just like Derby Day with all these aircraft descending. We flew at about 12,000 feet [3,600 metres] and dropped our bombs. Norman, the bomb aimer, was on the lookout below. He said a rude word and an aircraft flew underneath us and turned us onto our backs."

Above: Waughman's RAF service medals include the Distinguished Flying Cross (far left), Air Force Cross (second from left) and the Légion d'honneur (far right)

The aircraft had caused Waughman's Lancaster to turn upside down under one wing. "This is where the training came in. If you tried to struggle to get it level again you would most probably get high speed stalls and it would be a hell of a struggle. So we just carried on with the roll and rolled it out. We were at about 1,000 feet [305 metres] when we came out. The speed of a Lancaster is supposed to be 360 miles per hour [590 kilometres per hour], but we were doing over 400 [645 kilometres per hour] when we came out."

For Waughman's wireless operator Taffy Arndell, the barrel-roll had unfortunate consequences: "The lads had a big fruit tin with the top cut off, which they passed between themselves as a 'pee can'. Taffy told me that when we were turning upside down he could see this pee can rising with 'negative gravity' and it tipped all over him!"

Collision over Belgium

Only days after the Mailly-le-Camp raid, Waughman found himself in an even more dangerous situation on the night of 11-12 May 1944 during a raid on Hasselt in eastern Belgium. "We had just passed Antwerp and Curly, the engineer, was standing up looking out of his window beside me. He said, 'Oh Christ, bloody hell!' and this aircraft appeared

ARTEFACTS OF THE AIR

RUSTY WAUGHMAN KEPT SOME REMARKABLE SOUVENIRS FROM HIS WWII MISSIONS THAT RANGE FROM PERSONAL & PRACTICAL TO EXTREMELY DANGEROUS

SILK SCARF

"I wore this on every operation I went on. When you were flying you needed a woolly jumper, gloves, long johns and a scarf of some sort. It was a lucky talisman."



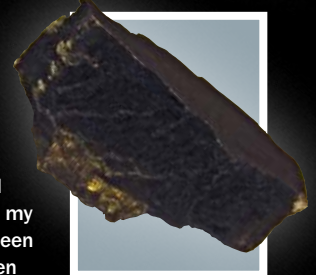
SPENT REAR GUN ROUND

"I picked this up in the bottom of the aircraft. Harry [Nunn] fired the guns and when they were fired these were ejected."



GERMAN FLAK SHRAPNEL

"This bit of shrapnel came in just behind my head. I must have been leaning forward when it came through the Perspex. It might not have necessarily killed me but it would have given me a nasty headache. It was quite well spent because it didn't come over with a great crash or bang. It was flak shrapnel from anti-aircraft guns, most probably 88mm, which was a marvellous gun. When it came into the aircraft it would be red-hot normally, but I didn't find this until we got out."



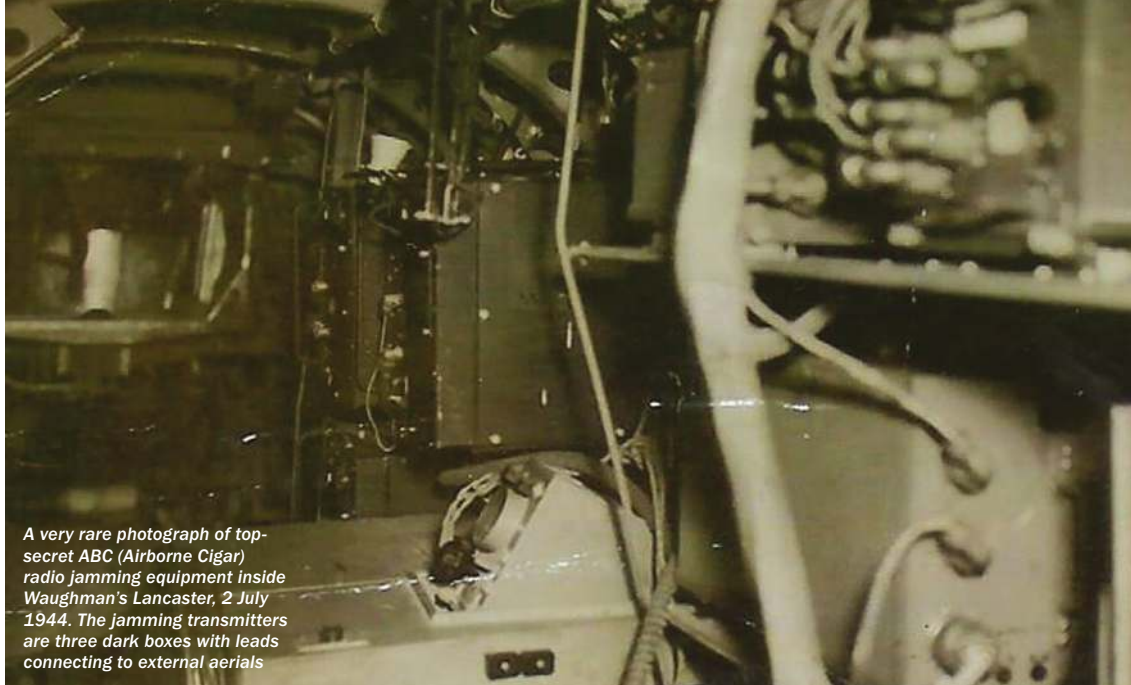
ESCAPE COMPASS

"If you had to bail out and were captured you had escape photographs and a compass to find out where you were. You wore it in your collar stud, and in those days you wore separate collars so that they weren't attached. The compass still works. You could have another one in the heel of your shoe."





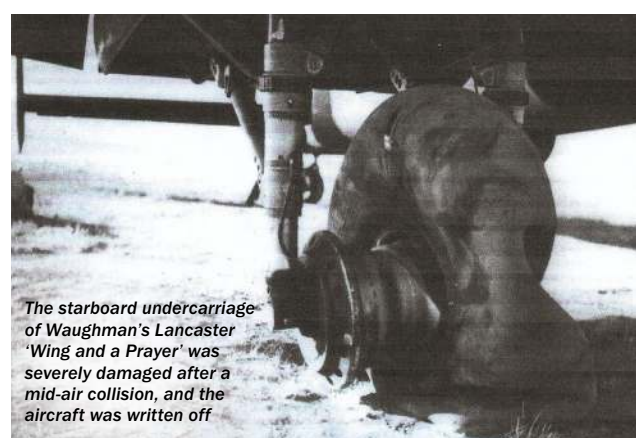
Curly Ormerod and Norman Westby in the cockpit of Waughman's first Lancaster bomber LM575 'Wing and a Prayer'. This aircraft was wrecked after a mid-air collision but Waughman piloted the crew to safety



A very rare photograph of top-secret ABC (Airborne Cigar) radio jamming equipment inside Waughman's Lancaster, 2 July 1944. The jamming transmitters are three dark boxes with leads connecting to external aerials



Waughman was part of the introduction committee for the RAF Bomber Command Memorial in London, which was unveiled on 28 June 2012. Waughman remarked that although the memorial is "wonderful" its commissioning came "far too late" for veterans



The starboard undercarriage of Waughman's Lancaster 'Wing and a Prayer' was severely damaged after a mid-air collision, and the aircraft was written off

"IT WASN'T UNTIL AFTERWARDS THAT WE REALISED THE IMPLICATIONS OF WHAT WE WERE DOING. ALL THESE THINGS COME IN RETROSPECT: HOW MANY PEOPLE MUST I HAVE KILLED?"

from nowhere and stabbed straight into the side of us. He slid underneath us and his canopy took off our starboard wheel. His propellers were slightly behind ours and they cut through our bomb aimer's compartment, just behind his feet.

"His turret cut through our fuselage just behind the bomb doors and we had a big hole right across the back. This damaged the two main longerons, which hold the aeroplane together, and we lost part of the tail and our electrics. I didn't see this aircraft at all, the only sensation I had was his propellers churning into us, but the controls and my joystick went completely limp. It seemed a long time but it was only a matter of seconds."

Despite the damage, Waughman continued to the target. "Our engines were choking on and we thought we might as well go and drop our bombs on the target as we were pointing in that direction. The master bomber had said, 'Don't bomb', but we carried on, found the railway lines and dropped our bombs on the marshalling yard, albeit four and a half miles [seven kilometres] north of where we should have done. It was pretty rough flying, but we managed to fly back."

During this perilous flight, Waughman's crew showed great bravery and solidarity. "We knew

the back end of the aircraft was very badly damaged and if we had taken evasive action we could have broken up. I told Harry [Nunn] in the rear turret, 'Get your parachute and come up front. If we have to bail out you'll have a better chance.' He said, 'No, I'll stop here and keep a look out.' We then cut back over the UK but knew we were going to have to make a crash landing because the starboard wheel was wonky. I gave the crew a chance to bail out over the base but they said, 'No, we'll stop with you.' These were the characters they were."

Upon arrival at Ludford Magna, Waughman performed a crash landing. "We did a single-engine, one-wheel landing and skidded off the runway in the dark, hurtling towards the control tower and stopped just short of it. Most of the control tower staff came out to see the upended aeroplane. The only casualty of that flight was one of the girls who jumped back and sprained her ankle as we came hurtling towards her!"

Waughman had brought his crew home safely with no injuries, was recommended for a medal and received a 'green endorsement' in his logbook, equivalent to a mention in dispatches. Despite his courage and skill, he was modest: "We were very fortunate and lucky largely through the efforts of the crew."

"A very lucky life"

Waughman's last mission was a raid on Sangatte on 5 June 1944 as part of the deception operations that preceded D-Day. With his operational flying now over he was interviewed by the station commander. "He had a crew statistics chart on the wall and said, 'There you are, you're the first crew that has finished your flights in over six months.'"

Having survived 30 deadly missions, Waughman's primary feeling was tired relief: "I've always found it a very difficult emotion to explain. You were a bit zombie-ish and the winding down was quite considerable, but you certainly went out and had a good few beers!"

The mass attacks conducted by Bomber Command over Europe killed hundreds of thousands of civilians, and subsequently made the RAF's strategy become highly controversial. Waughman reflected that, "It was a nasty business. It wasn't until afterwards that we realised the implications of what we were doing. All these things come in retrospect: how many people must I have killed? It's really quite strange. At the time you're just doing a job, but it is very difficult to put over the emotions that you felt at the time and afterwards."

Waughman now speaks regularly about his experiences in schools and events: "It's very flattering and I'm grateful I can talk about it but some people can't. When I talk about it I think, 'Did it really happen, am I making it up?' It feels good to give something back. I've had a very, very lucky life."



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Left
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BIRTH OF THE RAF

In April 1918 Britain formed the world's first independent air force in a bid to dominate the nascent aerial battlefields of the Western Front

WORDS STUART HADAWAY

A British B.E.2 flies among the clouds in WWI. In 1916 this type of plane would be the first to shoot down a Zeppelin over Britain



The formation of the RAF was the culmination of issues and problems dating back to 1912, but the major catalyst for change was the start of a new German strategic bombing campaign against Britain in May 1917. The Germans had been using airships – popularly known as ‘Zeppelins’ regardless of actual manufacturer – to raid Britain since January 1915. These raids had been small-scale affairs, with a handful of ships acting largely independently to attack targets over a wide area. Target location and aiming were rudimentary, and bomb loads were small, so in military and material terms they had caused few casualties and little damage. However, they made a serious impact on public morale.

For a thousand years, it was commonly said, Britain had been safely defended from any foreign attack by the English Channel. Louis Blériot’s crossing of the Channel by air in July 1909 had provided a warning, but it was not taken seriously until the coming of the airships. For 20 months the British armed forces (commonly held to be the best in the world) seemed unable to stem the attacks, but this was not a completely fair view. The British were working from scratch to build an unprecedented air defence system.

The Royal Naval Air Service (RNAS) had originally followed the traditional role of the Royal Navy in protecting Britain’s shores. In February 1916 this changed, and while the RNAS retained responsibility for the seas and coast, the Royal Flying Corps (RFC) took over the inland defences, attacking airships over the UK. However, actually intercepting Zeppelins was difficult. The war on the Western Front was the main focus of RFC activities, and it was as voracious for aeroplanes as it was for men. The RFC struggled to keep up with demands from the front, and only a few outdated aircraft could be spared for home defence.

The BE2c was the most common plane used, and with a ceiling of around 3,000 metres (10,000 feet) it could barely reach the heights habitually used by the Zeppelins. It was not just the height that was a factor, but also time. It took a BE2c over 45 minutes to reach that altitude. A pilot could take off with a definite fix on the Zeppelin’s position, but he could not communicate with the ground. After take-off, he would have no idea where in the night sky the enemy was unless the airship were picked up by searchlights.

“FOR A THOUSAND YEARS, IT WAS COMMONLY SAID, BRITAIN HAD BEEN SAFELY DEFENDED FROM ANY FOREIGN ATTACK BY THE ENGLISH CHANNEL”

**“WIRELESS INTERCEPTS
COULD LET THE BRITISH
KNOW WHEN AN ENEMY
WAS TAKING OFF FROM ITS
BASE, AS IT TESTED ITS OWN
WIRELESS EQUIPMENT”**



An artist's depiction of the moment Lieutenant Leefe Robinson shot down the first Zeppelin over the UK

Right: The RE.8 is often seen as an example of the lacklustre designs produced by the Royal Aircraft Factory



This drawback – the inability to provide real-time information to the pilot – was perhaps the biggest problem faced by the defence squadrons. Radar, of course, would have been very useful, but within the technical limitations of the day, by the summer of 1916 the air defence system had become remarkably sophisticated. Wireless intercepts could let the British know when an enemy was taking off from its base, as it tested its own wireless equipment. Any subsequent transmissions by the raider, asking for a navigation fix for example, would also be picked up and plotted. This would warn the defenders that a raid was coming, and possibly its size, but would not identify a target to help them concentrate their forces. In some areas of the coast, acoustic receivers ('sound mirrors') listened for the drone of approaching engines, but this technology was highly unreliable.

Once the aircraft were over land, they would be picked up by the extensive observer organisation that was spread across the country. Police and also railway staff backed up dedicated observer posts manned by soldiers. It may seem incongruous, but the railways formed a dense network across the country and, crucially, were well connected with both telegraph and telephone lines.

Observations would be passed rapidly to sector operations rooms, then copied back to London. Positions were plotted on gridded maps, eventually using coloured markers that corresponded to coloured segments on a clock, each colour a five-minute period. The age of the plot could then be instantly discerned, and those older than ten minutes removed. These techniques and organisations would be resurrected in the late 1930s and formed a pillar of the air defence system during the Battle of Britain.

From the operations room, requests for action could be sent to the HQs commanding the different defence elements. Apart from aeroplanes, there were two lines of anti-aircraft (AA) guns around London at eight kilometres (five miles) and 14 kilometres (nine miles) from the city centre, supported by a screen of search lights and balloon barrages. The system constantly evolved and improved, as did the

Lieutenant William Leefe Robinson was the first man to shoot down a Zeppelin over mainland Britain



DEFENCE IN DISARRAY

WITH THE ROYAL NAVY AND RFC ACTING ALMOST INDEPENDENTLY, BRITAIN'S DEFENCES WERE IN DIRE NEED OF COORDINATION AND RESTRUCTURING

Some of the delays experienced during the air raids of WWI were the result of the wasteful and chaotic state of Britain's aircraft (and perhaps more importantly engine) procurement system. The RFC had been established in 1912 with a military wing, a naval wing, the Central Flying School, and the civilian Royal Aircraft Factory. All orders for new aircraft, as well as the testing and evaluation of new types, were supposed to go through the Factory. However, the Royal Navy rapidly went its own way, working directly with Britain's tiny aircraft industry to develop their own machines. By 1914 the navy had attained complete independence, and the naval wing of the RFC had become the RNAS.

Although the Factory would produce some excellent aircraft, it also worked slowly, and many felt it was stifling innovation. This became a serious issue as the Germans began to win air superiority in 1915 during the 'Fokker Scourge' and the RFC was left behind in technological terms. It would happen again in the spring of 1917, and while this time German superiority was also due to their own tactics and poor British training, the fact that large parts of the RFC were still flying essentially the same aircraft they had since 1914 was nothing short of scandalous.

The Royal Aircraft Factory tended to be the scapegoat for these failings but, while true to an extent, other factors are also to be blamed. Britain's aircraft and engine industries were small and struggled to expand to keep up with demand. The Factory and the RNAS were often in direct competition to secure the limited output of the factories. Particularly for engines, the British often had to look abroad to make up their shortfalls, and in France representatives of the RFC and the RNAS were in direct bidding wars against each other and the French air services for the output of manufacturers there.

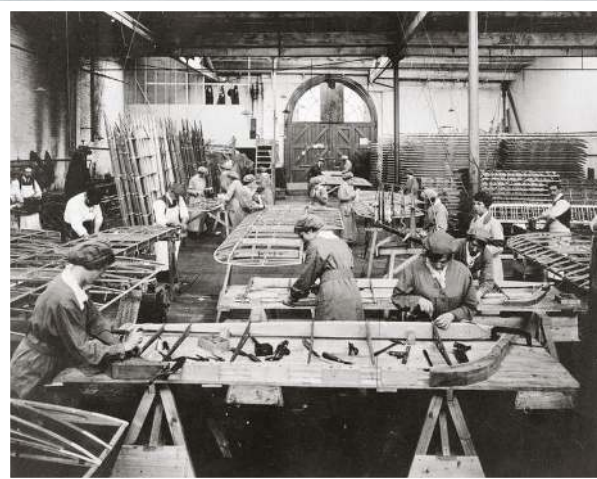
Several attempts had been made to bring coordination and efficiency to the system with a series of advisory committees, but they had no executive powers. These failed to have any effect, with the Admiralty in particular refusing to

co-operate. By the end of 1916 the two services had 9,400 aircraft of 76 different types on order, plus 20,000 engines of nearly 60 types. Even as the issue continued to have serious operational repercussions, it took a judicial inquiry and firm action by the prime minister to rectify the situation. In December 1916 a new Air Board was created with the official weight of a ministry, and the president of the Air Board (Lord Cowdray from January until November 1917) was given the status of a minister.

The Air Board was given control over the design of aeroplanes, the numbers and types ordered, and the allocation of aircraft to each service. The Ministry of Munitions had control of actual manufacturing and the inspection of finished aircraft, and so they took over management of the Royal Aircraft Factory. Although the Air Board controlled allocation, this was only in broad terms. They had no influence over how those aircraft were used within each service, and Cowdray's desire to build a strategic bombing force was simply ignored by both the RFC and the RNAS.

The new organisation would have a very real affect on the war in the air as it entered a critical phase. The first four months of 1917 saw the RFC taking increasingly high casualties on the Western Front, culminating in 'Bloody April' when over 250 aircraft were lost. The RFC was attempting to expand and modernise but could not do so while facing such losses. In April 1917 new aircraft types like the SE5a and the Bristol F.2B Fighter began entering frontline service, and from May losses dropped and strength increased. By taking a firm grasp of the production and supply systems, deliveries of aircraft more than doubled from 6,633 in 1916 to 14,832 in 1917, and again in 1918 to 30,782. In June 1917 the War Cabinet approved an expansion of the RFC from 108 to 200 squadrons, and an increase in the RNAS, with confidence that this target could be met. This total was to include a strategic force of ten long-range bomber squadrons, a number which was increased to 50 squadrons in August as calls began for reprisal raids against Germany.

A British aircraft factory. It took years for Britain's aircraft industry to grow to adequate levels, with the right equipment and properly trained staff



Lord Cowdray was president of the Air Board from January to November 1917



German and British aircraft engage on the Western Front. British planes struggled at several stages of the war against the often-superior technology and tactics of the Germans

"THE FIRST FOUR MONTHS OF 1917 SAW THE RFC TAKING INCREASINGLY HIGH CASUALTIES ON THE WESTERN FRONT, CULMINATING IN 'BLOODY APRIL' WHEN OVER 250 AIRCRAFT WERE LOST"

technology. AA guns, for example, were initially simply field pieces pointed upwards, but were gradually improved with special ammunition, better range-finders, improved sights that allowed for deflection, and faster rates of fire.

It took until the end of 1916, but the Zeppelin threat was eventually defeated. After this, operational realities came into play. The Royal Navy desperately needed small, quick-firing guns to arm the merchant ships that were suffering serious losses from German submarines. Indeed, the Germans were very close to winning this First Battle of the Atlantic, and in the winter of 1916 many guns were withdrawn from the air defences for this use. This reduced the number of personnel needed to man the AA cordon. These trained artillerymen were sent to France, where they were badly needed. Pilots were also desperately needed on the Western Front, and while the Home Defence squadrons were

"ON 13 JUNE THE FIRST DAYLIGHT RAID ON LONDON WAS MADE. SOME 162 PEOPLE WERE KILLED, INCLUDING 18 CHILDREN FROM THE UPPER NORTH STREET PRIMARY SCHOOL IN POPLAR, AND 432 WERE WOUNDED"

already committed to sending nine experienced pilots per month to France (to be replaced by newly qualified men), in March the transfer of an additional 36 men was approved. As it was, the 11 Home Defence squadrons (four dedicated specifically to London) only mustered just over 50 serviceable machines against their authorised strength of 96 aircraft. However, with the Zeppelins gone, the Western Front was the priority.

Then, in May 1917, this relieved sense of security was abruptly and dramatically

shattered. The Zeppelins had previously operated alone or in tiny groups, striking almost blind at night, scattering handfuls of bombs across wide areas, but on 25 May 1917 a formation of 23 German aeroplanes from Kampfgeschwader 3 appeared in close formation and in broad daylight approaching London. Although poor weather forced them away from the capital, the raid diverted south and dropped bombs, causing heavy civilian losses in Kent, especially Folkestone. The shock, so soon after the relief of the victory

A Handley Page V/1500 four-engine bomber. Just entering service in November 1918, it was designed to bomb Berlin



over the Zeppelins, forced the government to act. As the raids, carried out mostly by Gotha G.IV twin engine heavy bombers and supported by a few massive four-engine Zeppelin-Staaken Riesenflugzeuge 'Giants' continued, the military once again seemed powerless to stop them.

Two more Gotha raids and a Zeppelin raid followed in June. On 13 June the first daylight raid on London was made. Some 162 people were killed, including 18 children from the Upper North Street Primary School in Poplar, and 432 were wounded. The British were unable to bring down a single enemy aircraft.

After a long pause (apart from a raid on Harwich) the Gothas returned on 7 July, and 21 aircraft dropped 81 bombs in central London. Some 79 aircraft (of 20 different types) were scrambled by the RFC, and another 22 by the RNAS. Two British aircraft were lost, although one Gotha was brought down over the sea. Another four crashed, due to various reasons,

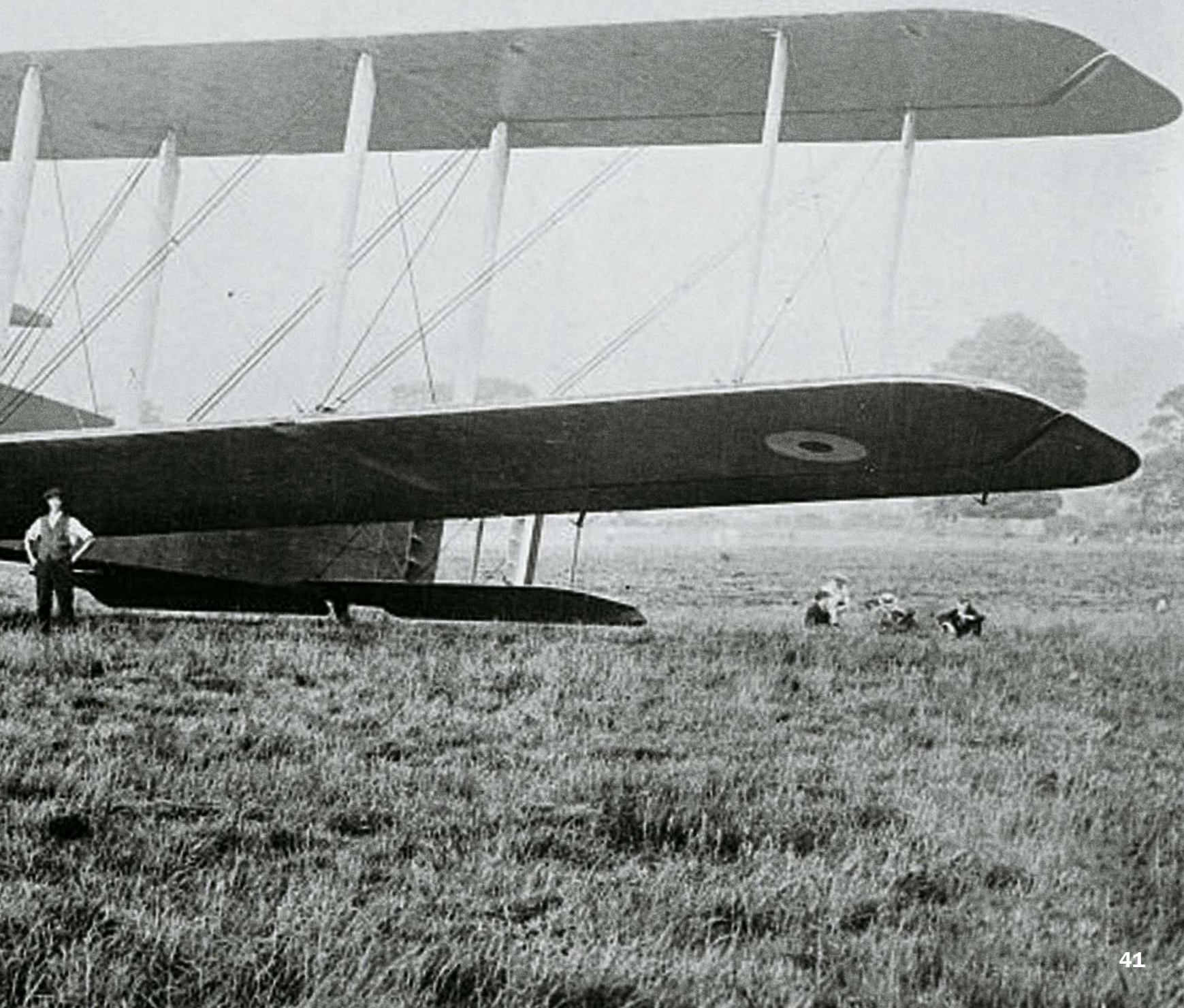
"IN MAY 1917, THIS RELIEVED SENSE OF SECURITY WAS ABRUPTLY AND DRAMATICALLY SHATTERED"

near their bases. A total of 54 people were killed in the raid and 190 wounded.

The apparent inability to stop these raids had several immediate effects, including that King George V changed the Royal family's surname from 'Saxe-Coburg-Gotha' to 'Windsor'. More importantly, on 11 July 1917 Prime Minister David Lloyd George appointed the South African General Jan Smuts to establish the Committee on Air Organisation and Home Defence Against Air Raids. The Committee presented two reports, on 19 July and 17 August 1917. The

first of these recommended a range of reforms to improve Britain's air defences. Primarily, Smuts called for better co-ordination of the home defences.

While the air defences may have been advanced and sophisticated, they were sadly disjointed. The RNAS aircraft around the coast worked in conjunction with HQ Home Defence, but they were still under independent, Admiralty control. The observer networks and the AA guns separately came under Lord French, the field marshal commanding Home Defence, as did the RFC's Home Defence Brigade. Therefore, three of the four key elements reported to Lord French, but there was no formal connection between them anywhere lower than this highest of levels. Any attempts to co-ordinate actions had to go all the way up through the different levels of command to the top, and then back down again, costing time.



THE FIRST GOTHA RAID

THE RAID ON 25 MAY 1917 SHOWED MANY OF THE STRENGTHS AS WELL AS THE WEAKNESSES OF BOTH BRITAIN'S AIR DEFENCES AND OF THE GERMAN BOMBERS

The German aircraft were first spotted at 4.45pm by a light ship in the North Sea and reported to the Admiralty. At 4.55pm the Admiralty was scrambling aeroplanes from Manston and seaplanes from Felixstowe and Westgate to intercept them. At 5pm the warning arrived at the War Office, and by 5.15pm the AA guns were on alert (and some were already opening fire as the Gothas started to cross the coast). Some 33 RFC aircraft had been scrambled.

At around 5.30pm the 21 Gothas encountered low cloud over London and diverted south. The cloud also obscured the view from the ground, and the defenders lost track of the raid. Flying in two distinct formations, the Gothas flew south, dropping sporadic bombs on north Kent, while the RFC struggled to reach altitude behind them. The Gothas, flying at over 4,300 metres (14,000 feet), were well above the ceiling of most of the aircraft sent up to find them, which were now searching in vain over London. Only one RFC aircraft, a DH5 being ferried to France, encountered and engaged the enemy, and was beaten off with damage. At 6pm the Gothas dropped bombs on Ashford, and at 6.15pm on Hythe and Saltwood on the south Kent coast, where extensive barracks and training facilities existed. Several civilians were killed or

injured. At 6.20pm the Gothas were over the barracks at Shorncliffe Camp, and 16 Canadian soldiers were killed and another 94 injured by bombs. A few minutes later bombs started to drop across Folkestone, a major cross-Channel port, and a single 50-kilogram (110-pound) bomb landed in Tontine Street, behind the harbour. The narrow street was packed with shoppers, with a long queue outside a grocer's after receiving a delivery of potatoes. The blast killed 33 men, women and children, and injured many more. One Canadian sergeant, recovering from a wound received at Vimy Ridge, recalled, "The whole of the street seemed to explode. There was smoke and flames all over, but worst of all were the screams of the wounded and dying and mothers looking frantically for their kids."

In all, 94 people were killed (17 of them soldiers) and 197 injured (102 of them soldiers). Further RNAS aircraft scrambled from Dunkirk intercepted the raiders, and brought one down over the Channel.

Initially at least, the command and control network had performed well during the raid, spreading the alert and activating the defences rapidly. However, the defences themselves were woefully lacking.

Smuts recommended that a joint headquarters immediately be set up at a lower level, to afford quicker communications and "the unity of command which is essential to any warlike operation". Within weeks, the London Air Defence Area (LADA) was formed to co-ordinate all of the city's defences. Smuts also recommended that the RFC's Home Defence squadrons be properly constituted as permanent units and equipped with modern aircraft, rather than their current use as de facto reserve units only able to launch smaller numbers of obsolete aircraft. As he saw it, the answer to the bomber threat was properly co-ordinated attacks by formations of fighters. AA defences were also to be strengthened. For both the aircraft and the guns, reinforcement would take time as new equipment was manufactured and personnel trained.

The Gothas made three more raids in August 1917, all aimed at east Kent ports. Although one was abandoned because of poor weather, 18 Gothas were lost, four to British aircraft, one to AA guns, and the rest to accidents or Dutch air defences. Britain's defences were stiffening, and the Germans switched to night raids in September. The Gothas now suffered the problems of flying and navigating by night, although of course it also hindered attempts to intercept them. However, the balloon barrages that were strung across the approaches to London were more effective at night, while the reinforced AA batteries were adopting barrage techniques, putting up walls of fire at certain points to discourage the enemy and force them to turn back, rather than engaging single aircraft. The areas around London were divided into strict zones for AA guns, balloons, and aircraft, creating a layered defence and reducing the risks of British fighters falling foul of the ground-based defences.

Further Gotha and Giant raids continued until the last, and largest on the night of 19-20 May 1918, known as the 'Whitsun Raid'. This involved 38 Gothas and three Giants. Only 18 of them managed to penetrate the LADA, dropping 72 bombs. Most were discouraged by the barrage of AA fire – some 30,000 shells were fired – while the (by then) Royal Air Force launched 88 sorties to intercept the bombers. Two enemy aircraft were shot down by AA fire and three by night fighters.

In all, the German aeroplane raids caused 837 deaths (486 in London) and 1,991 injuries

"THE DAY MAY NOT BE FAR OFF WHEN AERIAL OPERATIONS WITH THEIR DEVASTATION OF ENEMY LANDS AND DESTRUCTION OF INDUSTRIAL AND POPULOUS CENTRES ON A VAST SCALE MAY BECOME THE PRINCIPLE OPERATIONS OF WAR"

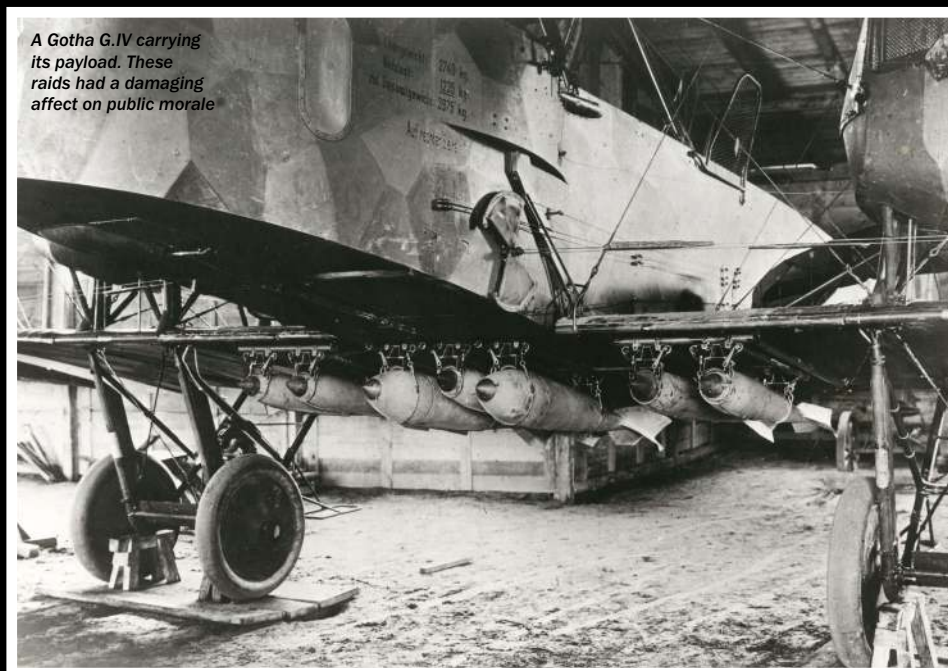
– General Jan Smuts



A Gotha G.IV approaches London



A Gotha G.IV prepares for a raid



A Gotha G.IV carrying its payload. These raids had a damaging effect on public morale



Policemen in London prepare to warn the public that an air raid is coming

“AA BATTERIES WERE ADOPTING BARRAGE TECHNIQUES, PUTTING UP WALLS OF FIRE AT CERTAIN POINTS TO DISCOURAGE THE ENEMY AND FORCE THEM TO TURN BACK”

(1,432 in London) during their 12-month campaign. 16 British aircraft were lost, while 24 Gothas were shot down by British defences, and 36 more (plus two Giants) were lost because of accidents.

While Smut's first report was successfully overhauling the Home Defence organisation, on 17 August 1917 he presented his second report. This examined the use of and co-ordination between the flying services and, doubtless encouraged by the success of the new Air Board, he concluded that they should be merged into an independent air arm, supported by an Air Ministry. Heavily influenced by the Gotha raids, Smuts enthused that “the day may not be far off when aerial operations with their devastation of enemy lands and destruction of industrial and populous centres on a vast scale may become the principle operations of war, to which the

older forms of military and naval operations may become secondary and subordinated”. He wanted to develop a strategic bombing force to this end – a call that was also being echoed across the country as the public clamoured for retaliatory raids on German towns.

The report was quickly, but secretly, acted on, and the many administrative and practical issues surrounding the creation of a new fighting service began to be tackled. Even so, the Cabinet continued to debate the issue. Many of the senior figures brought into the discussion, including Lord Cowdray and General Sir Hugh Trenchard, commander of the RFC in France, thought any such move should wait until after the war, while Smuts and General Sir David Henderson, general officer commanding the RFC and director general of military aeronautics, wanted it done as soon as possible. In the end,

Right: An early air raid warning poster



THE GROWTH OF THE RAF

AIRCRAFT STRENGTH

RNAS AEROPLANES & SEAPLANES

RFC AEROPLANES

AIRSHIPS

AUGUST 1914

93

179

3

AEROPLANES

SEAPLANES

AIRSHIPS

OCTOBER 1918

20,890

1,281

163

PERSONNEL

RNAS OFFICERS
RNAS OTHER RANKS
RFC OFFICERS
RFC OTHER RANKS

RAF OFFICERS
RAF OTHER RANKS
WRAF ALL RANKS

AUGUST 1914

50

550

147

1,097

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DECEMBER 1917

4,765

43,050

15,522

98,739

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OCTOBER 1918

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27,906

263,848

24,190



The Bristol F.2B Fighter. By 1917 the chaos was clearing, and the British began to introduce some excellent aircraft types



Sir Hugh Trenchard, first chief of the Air Staff



The Sopwith Triplane was an excellent aircraft but only saw limited use with the RNAS, due to the chaotic state of aircraft procurement



Graves of Canadian soldiers killed in the raid on 25 May 1917, in Shorncliffe Military Cemetery

the latter party won, and on 6 November 1917 Cabinet passed the draft Air Force Act, which was duly passed by Parliament and signed by the king by the end of the month. On 1 April 1918 the Royal Air Force would come into existence. In the meantime, an Aerial Operations Committee was established to look at the logistics behind building a strategic bomber fleet. In early October it was renamed the War Priorities Committee, with wide-ranging authority over munitions production, such as the perceived importance of developing a strategic bombing force.

There was now much to do. At a senior level, new staff and a ministry had to be properly established, although this proved highly problematic. Lord Cowdray resigned in umbrage at being very publicly passed over to be the first secretary of state for air, a job that went to Lord Rothermere instead. Rothermere was a press baron who did not transition well into politics. He hated having his actions debated or questioned, and often acted without consulting his senior staff. Trenchard had been brought back from France to be the first chief of the Air Staff (CAS), but on 13 April 1918 he resigned due to incompatibility with Rothermere. Henderson also resigned from the Air Council, and by the end of April Rothermere himself had resigned. It was an uninspiring

“THE RAF SUCCESSFULLY COMPLETED ITS TRANSITION WITH THE MINIMUM OF IMPACT ON THE FIGHTING FRONTS. INDEED, THE NEW, BETTER CO-ORDINATED SYSTEM SOON SHOWED ITS ADVANTAGES”

start. Rothermere was replaced by Sir William Weir, who made a success of the job, while Sir Frederick Sykes, who had been the original commander of the military wing of the RFC in 1912, became the new CAS. Trenchard would eventually return to France to command the Independent Force of strategic bombers.

There were many administrative questions to answer over rank structures, uniforms and organisation. For these, the new RAF took a very pragmatic approach. Beyond bringing the old RNAS units more in line with the former RFC, most of these questions were given a lower priority, and the focus remained on the operational performance of the new service.

With 137 squadrons (plus some flights) spread across the world from the UK to India, and even North America if you included training units, the RAF successfully completed its transition with the minimum of impact on the fighting fronts. Indeed, the new, better coordinated system soon showed its advantages.

Within ten weeks, the RAF was able to activate the Independent Force to start a bombing campaign over Germany. A dividend of both the better procurement system and the ability of the new service to expand away from the tactical focus of the army, the force would inflict small but serious damage on German production, as well as strike a blow against enemy morale. Across all of the fighting fronts, the RAF continued to expand with newer and better aircraft, and the number of active squadrons increased by 30 per cent in just eight months.

In some areas the RAF found new freedom to offer ideas and innovations without being shackled to the army's preconceptions. In Palestine, for example, the RAF was able to offer an air plan for the final British offensive in September 1918 that would have a shattering effect on the Ottoman forces opposing them. In a few short months, the RAF was able to demonstrate the formidable potential of air power in war.

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Heroes of the Victoria Cross

WILLIAM BARKER

Canada's most decorated serviceman was a daring fighter ace during WWI and even became a character in an Ernest Hemingway story

WORDS TOM GARNER

The Royal Air Force was formed on 1 April 1918 as an amalgamation of the Royal Flying Corps (RFC) and Royal Naval Air Service (RNAS). It was a direct response to the rapid development of aircraft during World War I as a new, effective weapon in warfare. Pilots of the RFC and RNAS had become, through very hard lessons, extremely effective fighters in the sky against formidable enemy opposition. One of these airmen who epitomised the new fighting spirit of the RAF was William George 'Billy' Barker VC. He would become the most decorated serviceman in Canadian history.

Barker was awarded the Victoria Cross towards the end of World War I, but he was officially recognised a dozen times for his bravery while flying with the RFC and RAF. His VC was a fitting conclusion to a remarkable war career that he miraculously survived.

An observer turned pilot

William Barker was born on 3 November 1894 in Dauphin, Manitoba in Canada in a log house. The eldest of nine children, he displayed several qualities as a teenager that would later make him an exceptional pilot. Barker was known to be analytical, independent, an excellent shot, had perfect eyesight and was attracted to risk. By 1913 his equestrian skills saw him serving as a militiaman in the 32nd (Manitoba) Horse, but Barker developed a love for flying after witnessing demonstration flights at industrial exhibitions in Winnipeg between 1910-14.

When Canada entered the war on 4 August 1914, Barker was in his final year at high school but decided to enlist as a trooper in the First Canadian Mounted Rifles Regiment on 1 December that year. After training as a machine gunner, Barker arrived in Britain in June 1915 before being posted with his regiment to the Ypres salient in Belgium. He remained in the trenches until late February 1916, when he volunteered to use his machine gun skills in the Royal Flying Corps.

After only four weeks of field training with Nine Squadron, Barker was commissioned as a temporary second lieutenant on 2 April 1916 before joining Four Squadron as an aerial observer. This task involved photographic and

visual reconnaissance as well as coordinating operations with ground artillery. Although he was not a pilot, Barker still managed to achieve his first airborne 'kill' from the rear of the B.E.2d aircraft he flew in.

By the time of the Battle of the Somme in July 1916, Barker had transferred to 15 Squadron, where he earned his first decoration four months later. During the Battle of Beaumont Hamel, Barker and his pilot were awarded the Military Cross for their work in supporting an assault.

Following his decoration, Barker undertook pilot training in England for only four weeks and was able to fly solo after just 55 minutes of air instruction. He became a flying officer on 14 February 1917. From this period, Barker's military career 'took off' in every sense as he became a prolific, daredevil pilot. By the end of May 1917 Barker had been promoted to captain, been given command of 'C' Flight in 15 Squadron and received a bar to his Military Cross. He was wounded by artillery fire in August, which forced him to work as an instructor in England for a time, but Barker was a restless soul. He often flouted regulations and even performed a low-level aerobatic display over Piccadilly Circus, and he was swiftly transferred to 28 Squadron in September 1917.

Italian exploits

It was during this period that Barker began to fly a Sopwith Camel with the designation 'B6313'. This aircraft was the making of him

"NOTWITHSTANDING THAT HE WAS NOW SEVERELY WOUNDED IN BOTH LEGS AND HIS LEFT ARM SHATTERED, [BARKER] DIVED ON THE NEAREST MACHINE AND SHOT IT DOWN IN FLAMES"

William Barker's VC citation

William Barker as a lieutenant colonel wearing an interim RAF uniform c.1918-19. Barker's decorations included a Victoria Cross, the Distinguished Service Order and Bar, the Military Cross and two Bars and the Croix de Guerre

“THIS COMBAT... BROUGHT HIS TOTAL SUCCESSES UP TO FIFTY ENEMY MACHINES DESTROYED, AND IS A NOTICEABLE EXAMPLE OF THE EXCEPTIONAL BRAVERY AND DISREGARD WHICH THIS VERY GALLANT OFFICER HAS ALWAYS DISPLAYED”

William Barker's VC citation

and Barker flew in B6313 for over a year with great success. In late October 1917 Barker was posted near Milan in northern Italy and further increased his daring reputation.

On Christmas Day 1917 Barker and his wingman, Lieutenant Harold Hudson, attacked a German airfield without orders. They set fire to one hangar and damaged four aircraft. After they finished the attack, Barker reportedly threw a painted sign out of B6313 that ironically declared “Merry Christmas”. According to legend, Barker’s Yuletide escapade caught the imagination of Ernest Hemingway. The writer served in Italy himself during World War I, and in his short story *The Snows Of Kilimanjaro* a character called ‘Barker’ returns from a Christmas Day attack on an Austrian officer’s train. Another character refers to him as a “bloody murderous bastard”, which may have been a personal attack by Hemingway, who knew and apparently did not like Barker.

Barker’s colleagues, who revered him, did not share Hemingway’s opinion. Many of them referred to him years after as a “god-like, larger than life warrior” as well as a “hero and an idol”. Although many fighter aces, like Albert Ball VC, developed reputations as talented loners, Barker had willing accomplices in his

intrepid attacks. Harold Hudson even repeated his impromptu teamwork with Barker in January 1918 when they launched successful sorties against enemy kite balloons. Like the Christmas Day attack, this assault was unauthorised, and both pilots were reprimanded by their commanding officer. Nevertheless, Barker was soon awarded the Distinguished Service Order, and his citation said that “his splendid example of fearlessness and magnificent leadership have been of inestimable value to the squadron.” Shortly afterwards, in March 1918, he was awarded a second bar to his Military Cross “for conspicuous gallantry and devotion to duty”.

Barker’s service in Italy went from strength to strength and his statistics were impressive. Upon joining 66 Squadron on 10 April, Barker already had 22 victories, and he received the French Croix de Guerre in May. He was promoted to temporary major two months later to command 139 Squadron, which flew two-seater Bristol fighters. Barker was reluctant to give up B6313 and kept it while he commanded the squadron. B6313 became the most successful fighter aircraft of World War I with Barker achieving 46 victories while flying it. The aircraft was retired in October 1918. However, Barker’s remarkable record while flying B6313

was largely forgotten because his successes were achieved in Italy, which received far less publicity than the Western Front.

By the summer of 1918 Barker was not just flying as a fighter pilot but also taking part in espionage operations. On the night of 9-10 August, Barker and his wingman, Captain William Wedgwood Benn, successfully parachuted an Italian army agent behind enemy lines – an act the Italians recognised with the awarding of a substantial decoration: the Silver Medal for Military Valour.

Barker returned to England in October 1918 to command a flight training school at Hounslow, but he was determined to spend some time flying over the Western Front again. It was during this closing month of the war that Barker reached the traumatic pinnacle of his career.

Flames over French skies

Having retired B6313, Barker chose to fly in a Sopwith Snipe and attached himself to 201 Squadron RAF when he was given permission to fly anywhere in France. On 27 October 1918 Barker found himself flying alone at around 6,400 metres (21,000 feet) over the Forêt de Mormal on the Franco-Belgian border when he saw a German two-seater aircraft. Barker



**“HE WAS A GOD-LIKE, LARGER
THAN LIFE WARRIOR”**

**A reminiscence from one of William
Barker VC’s RAF colleagues**



William Barker's Sopwith Snipe 'E8102' which he flew during the famous dogfight that won him the Victoria Cross on 27 October 1918

"attacked this machine, and after a short burst it broke up in the air." A Fokker D.VII then attacked Barker, who was "wounded in the right thigh, but managed, despite this, to shoot down the enemy aeroplane in flames."

Around 15 Fokker D.VIIs now attacked Barker and a fierce and improbable dogfight ensued. The odds were heavily against Barker, not just because he was heavily outnumbered but also because the D.VII was a feared German aircraft with the ability to 'hang on its propeller' and fire into the underside of opposing aeroplanes. His Sopwith Snipe was an improvement on the Camel, with a more powerful engine and higher altitude rate, but these upgrades were



William Barker with his favourite plane, the Sopwith Camel 'B6313'. Barker shot down 46 enemy aircraft and balloons in this single aeroplane

William Barker pictured in 1919 sitting in a captured Fokker D.VII. This particular aeroplane was one of the German aircraft that attacked Barker during his VC action on 27 October 1918



"THE DEADLIEST AIR FIGHTER THAT EVER LIVED"

Canadian WWI fighter ace Billy Bishop VC on William Barker

insignificant in the face of an attack by over a dozen enemy fighters.

Nevertheless, Barker's experienced fighter instincts came into play as "a large formation of Fokkers... attacked him from all directions; and [he] was again severely wounded in the left thigh; but succeeded in driving two of the enemy into a spin." With two wounds, Barker lost consciousness and his Snipe span out of control. When he came to, Barker discovered he was again being attacked by a large formation. Barker singled out one machine and "deliberately charged and drove it down in flames."

During this second fight, Barker's left elbow was broken and he fell unconscious again before reawakening in the midst of another attack. Despite being "severely wounded in both legs and his left arm shattered, he dived on the nearest machine and shot it down in flames."

Barker was now extremely exhausted and in great pain, and his priority became landing behind Allied lines. As he tried to reach safety, "another formation... attacked and endeavoured to cut him off, but after a hard fight he succeeded in breaking up this formation." The heavily wounded Barker finally reached the Allied lines, where he crash-landed while heavily bleeding and barely conscious.

Canada's most decorated serviceman

This astonishing aerial battle had resulted in four German aircraft being shot down by Barker, but the most remarkable fact was that he survived. The dogfight on 27 October was his last action of World War I and Barker was awarded the Victoria Cross for the remarkable

bravery he had shown in taking on so many German fighters single-handed. His VC citation concluded that Barker's actions were "a notable example of the exceptional bravery and disregard which this very gallant officer has always displayed throughout his career".

Barker's war record was indeed astonishing. He had 50 victories to his credit, had never had a wingman killed in action and no aircraft he escorted had been shot down. The VC was the highest decoration he was awarded, but he also received the Distinguished Service Order and Bar, the Military Cross and two Bars, two Italian Silver Medals for Military Valour, the Croix de Guerre and three mentions in dispatches.

It was little wonder that Barker became the most decorated serviceman in Canadian history, but his bravery came at a price. Although he finished his military career as a wing commander, Barker never recovered from his wounds and he was in constant pain for the rest of his life. Although he was given key roles in the newly formed Royal Canadian Air Force, Barker took part in several unsuccessful aviation business ventures and became increasingly dependent on alcohol.

On 12 March 1930 Barker was demonstrating a new biplane, the Fairchild KR-21, when he lost control on a steep climb and was instantly killed when his aircraft struck the frozen Ottawa River. He was only 35 years old. He was given a state funeral in Toronto that was attended by political and military leaders, six VC recipients and an honour guard of 2,000 men. Just over a year later, Barker's friend and fellow Canadian ace Billy Bishop VC would laud him as "the deadliest air fighter that ever lived".

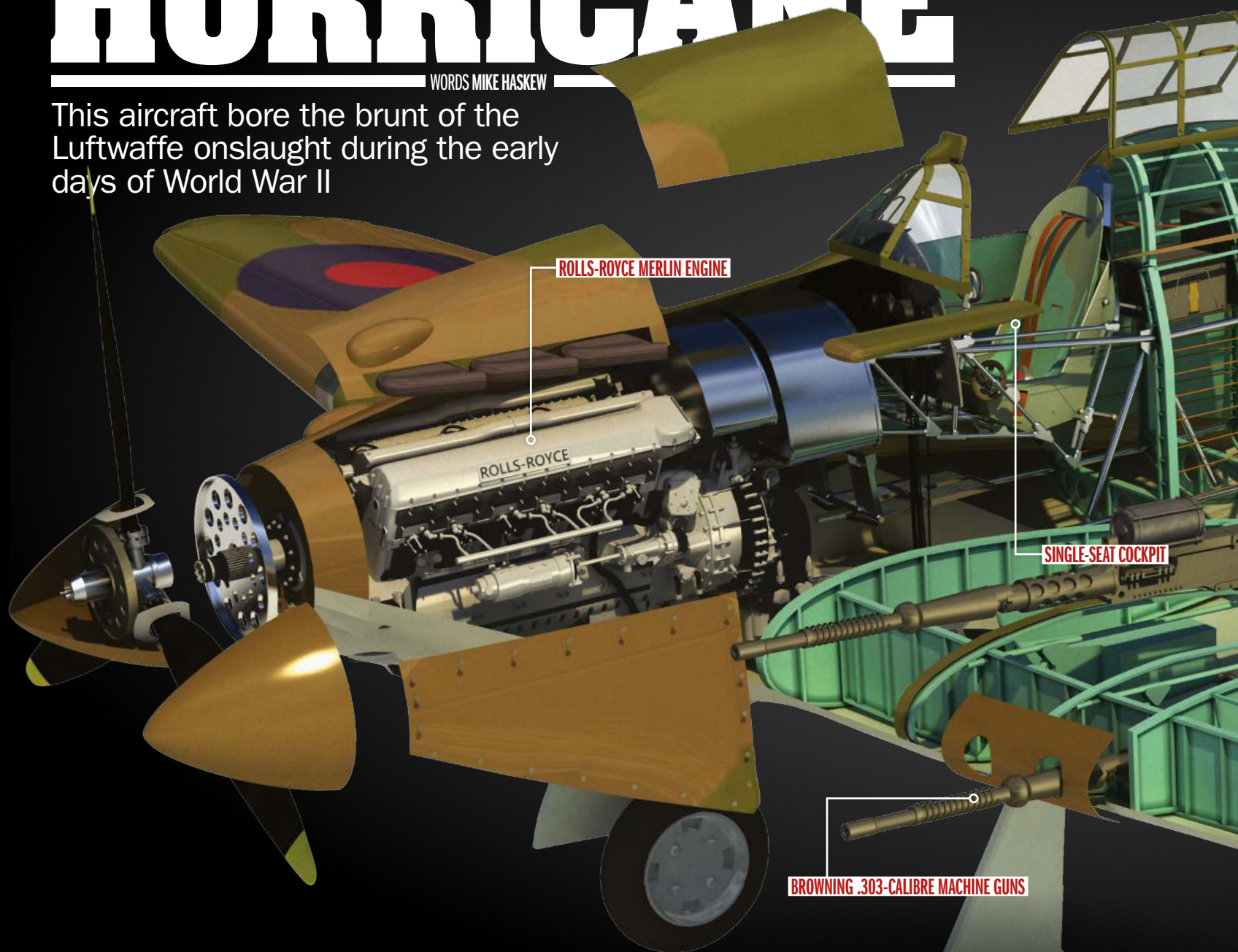
HAWKER HURRICANE

WORDS MIKE HASKEW



Above: The Hawker Hurricane, one of the RAF's most successful fighters

This aircraft bore the brunt of the Luftwaffe onslaught during the early days of World War II



Although its legacy exists in the shadow of its RAF cohort, the Supermarine Spitfire, the Hawker Hurricane was the workhorse of Fighter Command early in World War II. At the beginning of the Battle of Britain, in late summer 1940, half the squadrons of Fighter Command were equipped with Hurricanes, while only 20 were flying the Spitfire. The remainder were assigned the inferior and vulnerable Boulton Paul Defiant.

The Hurricane also wrote heroic chapters in the aerial defence of the island of Malta in the Mediterranean, in North Africa, and on the European continent, as the Nazi war machine invaded France and the Low Countries and the British Expeditionary Force required tactical air support. Throughout the war the Hurricane was also the mainstay of Commonwealth air forces in the Far East.

The first operational monoplane RAF fighter, the Hurricane was also the first such aircraft

to exceed an airspeed of 480 kilometres per hour (300 miles per hour), tracing its origin to 1933, when work began on the Hawker Fury monoplane powered by a Rolls-Royce Goshawk engine. The following year, the Air Ministry issued specifications for a new fighter. A design conference was held a few months later, and the prototype flew on 6 November 1935.

The Hurricane entered service with No. 111 Squadron at Northolt in December 1937, and the aircraft was modified on several occasions,

“THE FIRST OPERATIONAL MONOPLANE RAF FIGHTER, THE HURRICANE WAS ALSO THE FIRST SUCH AIRCRAFT TO EXCEED AN AIRSPEED OF 480 KILOMETRES PER HOUR”

FUSELAGE OF DURALUMIN AND WOOD

HAWKER HURRICANE

COMMISSIONED: 1937

ORIGIN: UK

LENGTH: 9.75M (32 FT)

RANGE: 740KM (460 MI)

ENGINE: 1,030-HORSEPOWER, LIQUID-COOLED V-12 ROLLS-ROYCE MERLIN II OR III

PRIMARY WEAPON: 8 X BROWNING .303-CALIBRE MACHINE GUNS

SECONDARY WEAPON: 2 X 113-KG (250-LB) OR 227-KG (500-LB) BOMBS

CREW: 1

with the addition of self-sealing fuel tanks, additional underwing drop tanks, alterations for service in desert and tropical climates, and racks that carried up to two 227-kilogram (500-pound) bombs for the fighter-bomber role.

In September 1944, the last Hurricane built in Britain was delivered to the RAF. More than 14,000 were completed, 12,950 by Hawker and Gloster Aircraft Company in Britain. More than 1,000 were built in Canada by the Canadian Car & Foundry Co.



The Hawker Hurricane reveals its distinctive hump just aft of the cockpit



Above: Early versions used available materials in order to bring the Hurricane into service as World War II loomed



Above: This Hurricane has been modified to take on the fighter-bomber role

During the Battle of Britain, Hurricane squadrons performed admirably



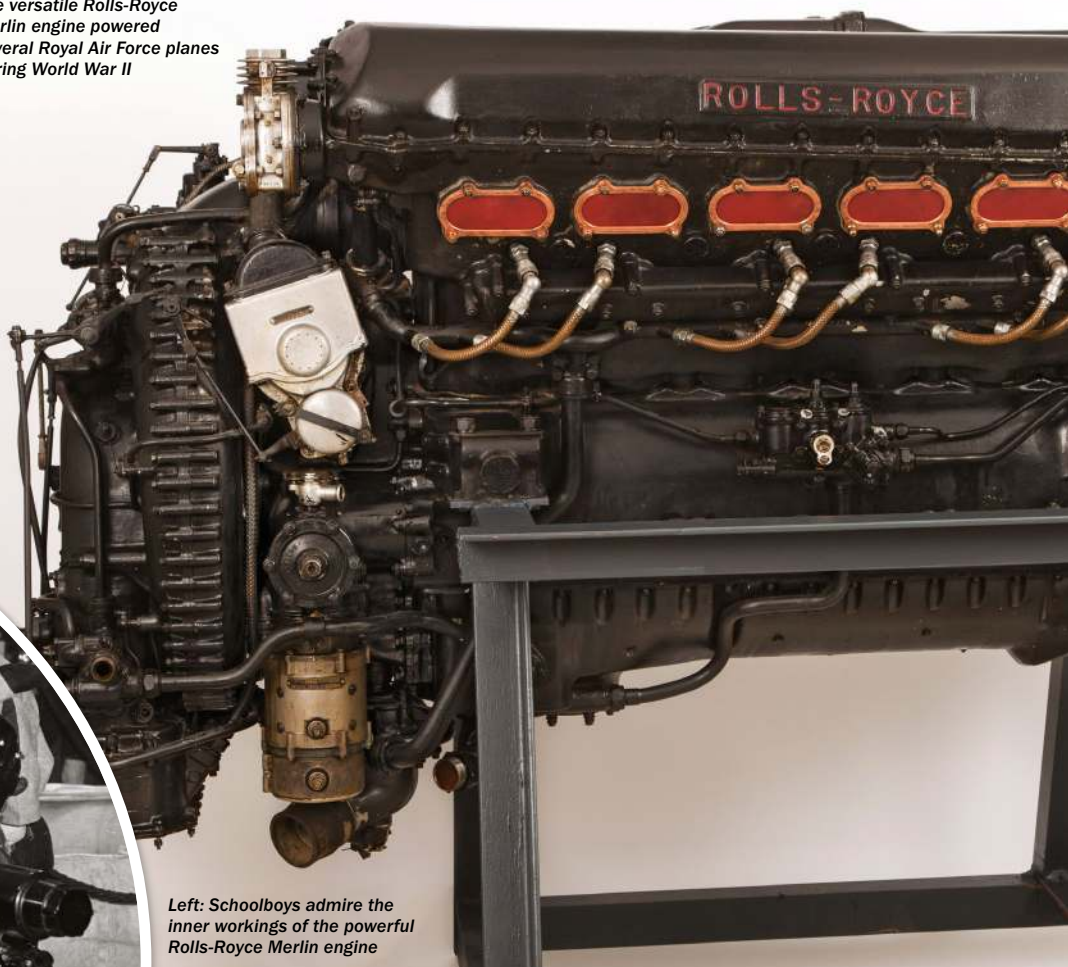
"THE VERSATILE MERLIN WAS ONE OF THE MOST SUCCESSFUL AIRCRAFT ENGINES OF WORLD WAR II, ALSO POWERING THE AVRO LANCASTER BOMBER, SUPERMARINE SPITFIRE FIGHTER, AND IMPROVING THE PERFORMANCE OF THE NORTH AMERICAN P-51 MUSTANG FIGHTER"

ENGINE

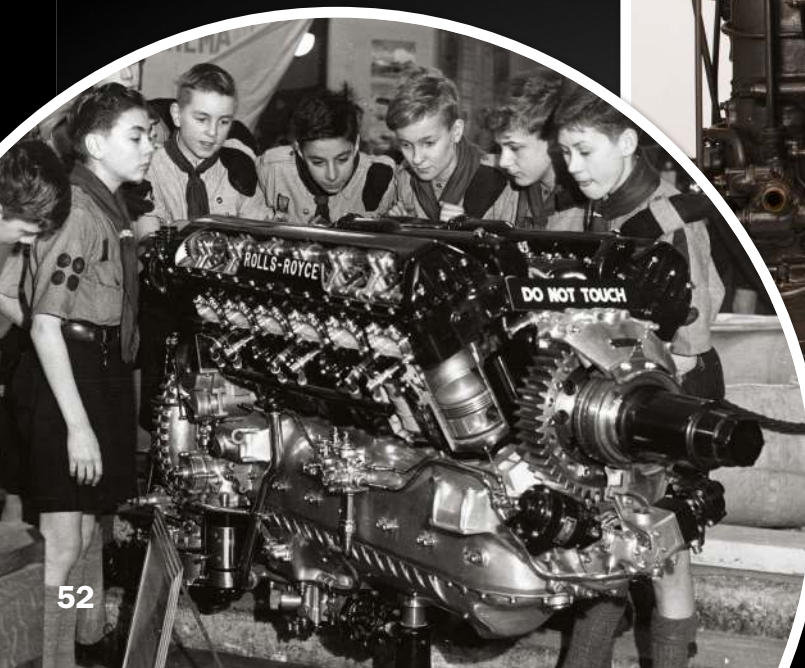
The Rolls-Royce Merlin was a liquid-cooled, 12-cylinder inline aircraft engine developed in the early 1930s, with its first run on 15 October 1933. The versatile Merlin was one of the most successful aircraft engines of World War II, also powering the Avro Lancaster bomber, Supermarine Spitfire fighter, and improving the performance of the North American P-51 Mustang fighter.

The Merlin delivered 1,030 horsepower, giving the Hurricane a top speed of 512 kilometres per hour (318 miles per hour). Performance improved throughout the war, and nearly 1,500 were built at Rolls-Royce factories in Glasgow, Derby and Crewe, and in Ford of Britain's Trafford Park facility near Manchester.

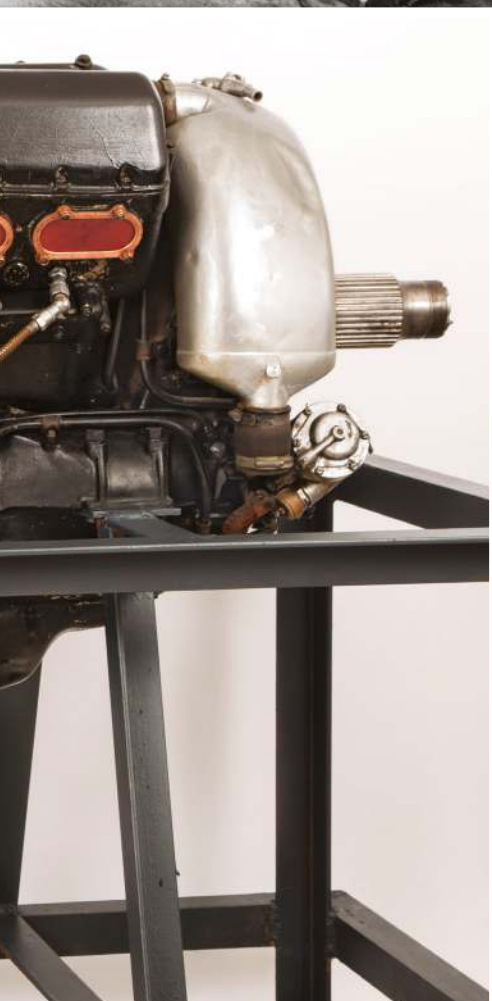
The versatile Rolls-Royce Merlin engine powered several Royal Air Force planes during World War II



Left: Schoolboys admire the inner workings of the powerful Rolls-Royce Merlin engine

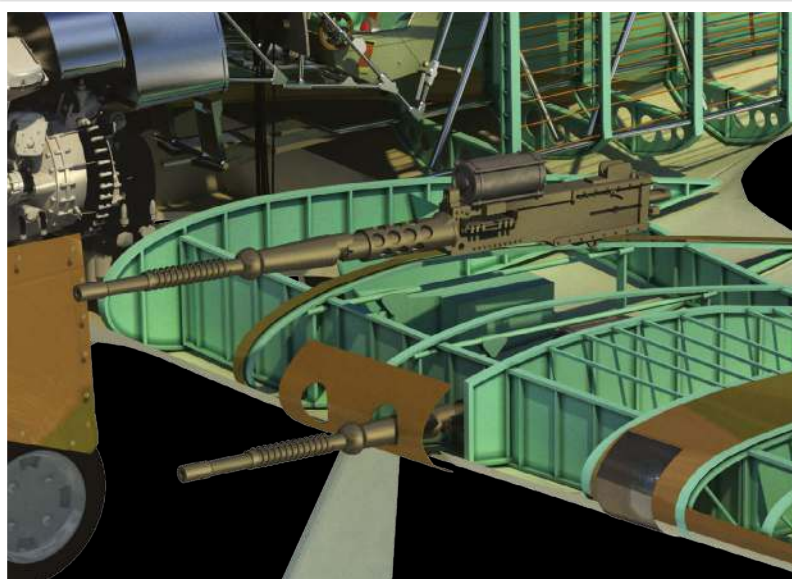


Armourers load a Hawker Hurricane's wing-mounted Browning .303-calibre machine guns



ARMAMENT

The early production Mk. I Hurricane was armed with eight wing-mounted Browning .303-calibre machine guns, while later versions mounted a variety of weapons. The IIB, for example, was upgunned with 12 .303-calibre machine guns and racks for a pair of 113-kilogram (250-pound) or 227 kilogram (500-pound) bombs. The IIC carried four powerful Hispano 20mm cannon and retained bomb capability, while the IID mounted a pair of Vickers 40mm S guns and two .303-calibre machine guns. The Hurricane IV carried two 40mm S guns, two .303-calibre machine guns and a pair of 227-kilogram bombs. Later variants proved to be effective tank-busting aircraft.



Above: .303-calibre Browning machine guns featured in several variants of the Hurricane

"THE EARLY PRODUCTION MK I HURRICANE WAS ARMED WITH EIGHT WING-MOUNTED BROWNING .303-CALIBRE MACHINE GUNS"



Female workers assemble the components of a Hawker Hurricane on the factory floor

“THIS DESIGN ASPECT, AT FIRST AN EXPEDIENT TO GET THE FIGHTER INTO SERVICE, REMAINED UNCHANGED”

COCKPIT

The tight but efficient Hawker Hurricane cockpit included a standard instrument panel directly in front of the pilot's seat with the stick centred. The battery voltage strength indicator was to the left, with elevator and rudder trim control at lower left and throttle at upper left, along with fuel tank selectors for main and reserve supplies. The airspeed indicator, artificial horizon, vertical speed indicator, altimeter, direction gyroscope and turn and slip indicator were located left to right in a double row in the forward panel. Engine instruments, including boost gauge, oil pressure and temperature indicators, as well as the fuel pressure indicator, were to the right on the panel.

The cockpit placed a standard instrument panel directly in front of the pilot and in close proximity to the stick

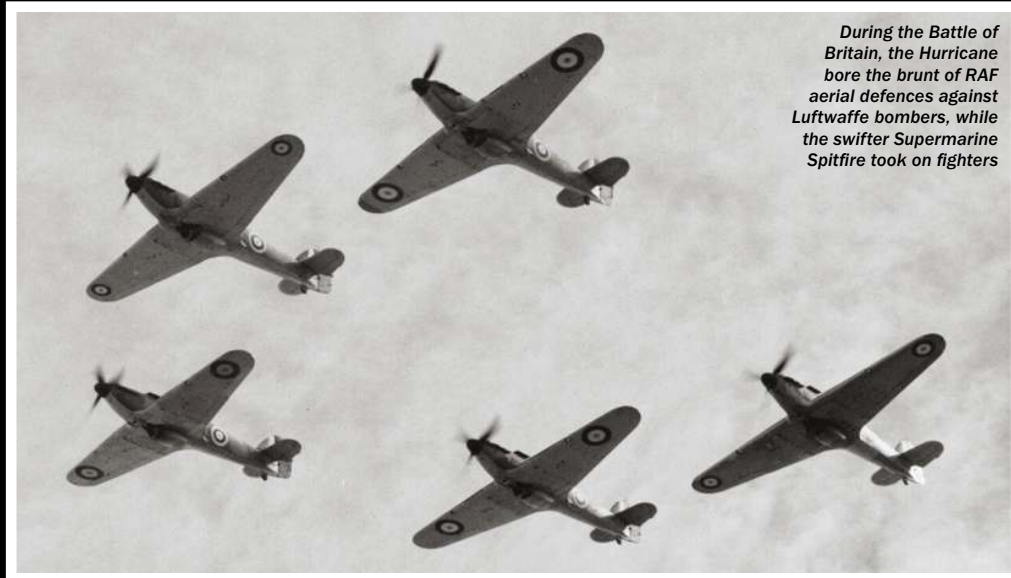


DESIGN

Aircraft designer Sir Sydney Camm developed the low-wing cantilever Hawker Hurricane. Early production aircraft wings were covered in fabric and were later replaced with stressed-skin metal wings, while the fuselage was of tubular duralumin and wood construction covered with fabric. This design aspect, at first an expedient to get the fighter into service, remained unchanged throughout production. The Hurricane was relatively heavy – a sturdy and stable gun platform. However, it was slower than the Spitfire and the German Messerschmitt Me 109. Its service ceiling of 34,000 feet was lower than the Me 109, and the pilot had to contend with a blind spot that made the Hurricane vulnerable to attack from the rear.



Sir Sydney Camm led the design team that developed the Hawker Hurricane



During the Battle of Britain, the Hurricane bore the brunt of RAF aerial defences against Luftwaffe bombers, while the swifter Supermarine Spitfire took on fighters

SERVICE HISTORY

QUIET VICTOR IN THE BATTLE OF BRITAIN, THE HAWKER HURRICANE SERVED IN EVERY RAF THEATRE OF WWII

While the Supermarine Spitfire cut a dashing figure over Britain, the Hawker Hurricane might best be described as the not-so-comely stepsister. Nevertheless, the Hurricane held the line during the dark days of the Battle of Britain, shooting down more German aircraft than any other plane in Royal Air Force service. Hurricanes of No. 615 Squadron alone claimed nearly 100 enemy planes.

Although less manoeuvrable than the German Me 109 fighter and considerably slower, the Hurricane could take severe punishment. Superior range also allowed it to remain airborne longer than its adversary. Compensating for the Hurricane's shortcomings as a dogfighter, RAF pilots developed effective tactics: the Hurricanes attacked German bombers, while the more nimble Spitfires tangled with enemy fighters.

On 17 August 1940, Flight Lieutenant J.B. Nicolson of No. 249 Squadron earned the Victoria Cross, shooting down an Me 110 fighter despite grievous wounds and flames streaking from his damaged Hurricane. Wing Commander

Robert Stanford Tuck of No. 257 Squadron and Sergeant Josef Frantisek of No. 303 Squadron were leading Hurricane aces during the Battle of Britain. The highest-scoring Hurricane ace of World War II was Squadron Leader Marmaduke 'Pat' Pattle with 35 victories in the Mediterranean.

Despite its shortcomings, pilots praised the Hurricane. "It became a good friend right from the start," one related, "and I loved it more and more."

In 1941 RAF Squadrons No. 81 and No. 134 flew with the Soviet Red Air Force on the Eastern Front. In the China-Burma-India theatre, Hurricanes of No. 20 Squadron destroyed 13 Japanese tanks in a memorable mission. Hurricanes were outfitted as night fighters and were also catapulted from merchant ships, providing air cover for trans-Atlantic convoys.

The Hurricane's service life stretched into the 1950s with the air forces of at least 25 countries. From 1945 to 1959, a single Hurricane was afforded the honour of leading the annual RAF fly-past over London to commemorate the Battle of Britain.

A Hurricane swoops down in a steady dive as its pilot acquires a ground target

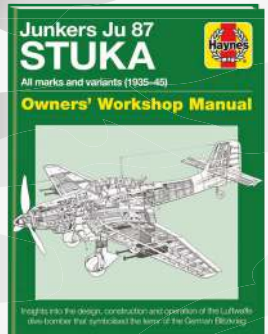
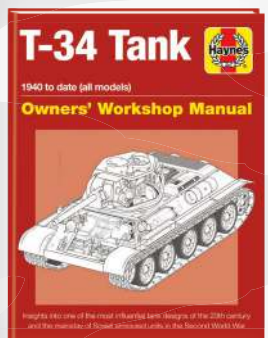


"DESPITE ITS SHORTCOMINGS, PILOTS PRAISED THE HURRICANE. 'IT BECAME A GOOD FRIEND RIGHT FROM THE START,' ONE RELATED, 'AND I LOVED IT MORE AND MORE'"

Images: Alamy, Getty, Ken LaRock, Alex Pang



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MEHMED

THE CONQUEROR

Ottoman Sultan Mehmed II forged a superpower in the 15th century by ruthlessly campaigning against an array of powerful enemies

WORDS WILLIAM WELSH

“Advance my friends and children!” Sultan Mehmed II shouted to the Ottoman troops preparing to attack the landward walls of Constantinople in the early morning hours of 29 May 1453. “Now is the moment to prove yourself worthy men!”

With parade ground precision, the provincial troops streamed forwards shouting “Allah!” As they tried to scale a makeshift barricade plugging a breach in the walls made by the sultan’s siege guns, they recoiled from the barrage of rocks, buckets of hot pitch and molten streams of Greek fire hurled at them by the Byzantine defenders.

Mehmed rode forward to check the progress of the assault. He screamed, shouted and swore in an effort to will his army into the city. He waved forward fresh units to maintain heavy pressure on the Christian defenders. After a superhuman effort, the Anatolians withdrew, having failed to overwhelm the enemy.

Mehmed had one last chance for victory on 29 May 1453, in what he had decided several days earlier would be his final attack on the city after a 53-day siege. If he combined his elite palace regiments with his janissary brigade, he would have enough men for another assault. Demonstrating the quick thinking that was the mark of a great commander, Mehmed personally led them to their jump-off point. They were eager for battle and welcomed an opportunity to prove themselves in front of their sultan.

As they fought at the stockade, Mehmed rode back and forth behind them yelling encouragement. Despite the auspicious start to their attack, it faltered like the one before it. Then a pair of fortunate incidents gave the Ottomans the advantage they needed to overwhelm the exhausted defenders.

Game of deception

Although Mehmed had two half-brothers ahead of him in line for the succession to the imperial throne, both of them died prematurely. From an early age Mehmed had an extremely volatile personality, which frequently manifested itself throughout his rule in bouts of rage.

After two false starts in the 1440s, in which his father Murad II abdicated in favour of Mehmed only to be recalled by the grand vizier when his son proved too inexperienced to establish stability, Mehmed at last became sultan on 3 February 1451, upon his father’s death. Mehmed quickly ratified existing treaties and truces with the Byzantines, Hungarians, Serbians and Venetians. The Christians saw him as a bumbling, weak sultan because of his earlier false starts, but Mehmed was consciously deceiving them.

Mehmed’s pledge of peaceful intentions to Byzantine Emperor Constantine XI Palaeologus had been entirely false. Constantinople had long been a thorn in the side of the Ottomans. The Byzantine Empire’s existence interrupted the routine movement of the Porte’s military forces back and forth between Anatolia and Rumelia. Moreover, it also sparked Christian

crusades – in 1396, 1444 and 1448 – designed to ‘liberate’ Constantinople from the clutches of the surrounding Ottoman sultanate. The strength of the sultanate was evident in its having defeated the crusaders each time.

To remedy the situation, Mehmed decided he would not only begin a rapid ship-building program in the northern Aegean, but also construct a fortress on the European side opposite Anadolu Hisar. Mehmed named the fortress, which he intended to serve as a forward base for siege operations against Constantinople, Bogazkesen Hisar, meaning ‘strait cutter’ fortress, as it was intended in part to ensure the Ottomans controlled maritime trade in the Black Sea region. The site where the Ottomans would build the castle was Byzantine territory, and therefore the project would show that Mehmed had no qualms about violating Byzantine sovereignty.

Construction began in April 1452 and was completed in the record time of four months. When Emperor Constantine XI sent emissaries to Mehmed in June 1452 bearing gifts and imploring him to desist, he had them beheaded. It was tantamount to a declaration of war.

While he was overseeing the construction of Bogazkesen, also known as Rumeli Hisar, a Hungarian engineer named Urban approached Mehmed with the offer to custom build large bombards capable of knocking down thick walls. Urban had approached Constantine XI first, but the Byzantine emperor could not afford the high cost of the weapons. Mehmed took Urban up on the offer.

"FROM AN EARLY AGE MEHMED HAD AN EXTREMELY VOLATILE PERSONALITY, WHICH MANIFESTED ITSELF FREQUENTLY THROUGHOUT HIS RULE IN BOUTS OF RAGE"

Ottoman Sultan Mehmed II, shown in 1453 at the time of the conquest of Constantinople. The 21-year-old ruler sports a beard in emulation of the Prophet Mohammed



Mehmed decided to test the first bombard that Urban furnished at Rumeli Hisar. The garrison mounted the bronze cannon, which could fire 272-kilogram (600-pound) stone balls, in the tower nearest the water. At that location, the Bosphorus is only 640 metres (700 yards) wide, a distance that was in range of the large bombard. Mehmed issued orders that all vessels were to heave to for inspection by the Ottoman navy. This was done to ensure that grain and other supplies were not delivered by the Latin colonies on the shores of the Black Sea to Constantinople for the upcoming siege.

On 25 November 1452 three Venetian merchant ships tried to run the gauntlet. Two succeeded, but one bearing grain for Constantinople was sunk by a direct hit. The Ottomans fished the sailors and captain out of the water. Mehmed ordered the sailors beheaded and the captain impaled as a warning to other vessels.

Artillery advantage

By expanding the Ottoman navy and procuring powerful new siege cannons that had only become available in Europe in the 15th century, Mehmed had the tools and equipment he needed to besiege Constantinople with confidence. Constantine, who was not able to get large-scale reinforcements from the Papacy or the Republic of Venice, had to make do with his garrison and a small number of reinforcements from Genoa. For the battle that was brewing, the Ottoman army could field 80,000 men against the Byzantines' 6,000 Greek and 3,000 foreign troops. The Ottoman navy that arrived off Constantinople totalled 125 ships, which was five times the number of ships the Byzantines had in their harbour, known as the Golden Horn. A massive chain that floated on wooden blocks barred the entrance to the harbour.

Urban's great bronze bombard used at Rumeli Hisar had greatly impressed Mehmed,

and he ordered even larger guns to batter the thick walls of Constantinople. Mehmed ordered a foundry built at Edirne (Adrianople) for the manufacture of the bombards and smaller guns. Urban's mightiest bombard was eight metres (27-feet) long and fired a stone ball weighing 608 kilograms (1,340 pounds). The gun was transported to the vicinity of Constantinople in March 1453. Although the Greeks in Constantinople had artillery, their towers were too fragile to accommodate the vibration that occurred when they were fired.

Mehmed joined his army before the walls of Constantinople on 5 April. He sent an emissary requesting immediate, voluntary surrender as required by Islamic law in return for a guarantee of the safety of the inhabitants, but Constantine declined the offer. Although the Byzantine emperor knew that he was heavily outnumbered and likely to suffer a terrible defeat, he chose to fight for the honour of his people.

Constantine had to stretch his army thin to man the 23 kilometres (14 miles) of walls and the 96 towers. The city was defended by an outer curtain and a higher inner wall. A wide ditch in front of the outer landward wall was designed to slow the assault. The Byzantine emperor hired Genoese engineer Giovanni Giustiniani to improve the city's defences. Giustiniani, who arrived with 700 Genoese troops, put men to work repairing and strengthening the walls.

Meticulous planner

Mehmed was a well-rounded commander who could not only lead troops in battle, but also had an aptitude for planning and logistics. Moreover, he was keen on employing the latest scientific methodologies in siege warfare, such as bronze bombards.

On 6 April 1453 the Ottoman army arrived outside Constantinople. The sultan bivouacked opposite the centre of the landward walls between the Romanus and Charisius gates.

WAR BETWEEN EAST AND WEST

THE PORTE FACED A VENETIAN-LED ALLIANCE DURING THE 16-YEAR CONFLICT TO CONTROL THE BALKAN LANDS

07 Thousands of Ottoman horsemen, known to the Venetians as *saccommanni* (sackers), raided deep into the Venetian Republic in summer 1478, pillaging and burning villages, farms and crops. Venetian troops remained in their forts, afraid to meet them in battle. The *saccommanni* penetrated as far as the Tagliamento valley.

“MEHMED WAS A WELL-ROUNDED COMMANDER WHO COULD NOT ONLY LEAD TROOPS IN BATTLE, BUT ALSO HAD AN APTITUDE FOR PLANNING AND LOGISTICS”

The Ottoman artillerymen fired the great bronze bombard for the first time five days later, and it brought down a large section of wall near the Charisius Gate. To the astonishment of the besiegers, the Greeks repaired the wall during the night. In April initial attempts to storm the defences failed, but the bombardment of the walls continued unabated.

The Christians benefitted from not having to defend the two kilometres (three miles) of walls overlooking the harbour known as Golden Horn, but this soon changed. In early April Mehmed set his engineers to work constructing a roadway that would run from the Sea of Marmara, over the 60-metre (200-feet) high hill behind the suburb of Galata on the opposite bank of the Golden Horn from the great city, and down to a place known as the Valley of the Springs. From there the ships could be rowed

Left: The final assault by the Ottomans against Constantinople overwhelmed the Byzantine defences and resulted in a bloodbath



04 The presence of Ottoman forces in Albania and Bosnia in 1467 threatened the security of Venetian holdings in Dalmatia and Venetian Albania. The threat of Ottoman attack sparked a mass exodus of Albanians to Italy.

06 Mehmed invaded Albania again in 1478 and forced the surrender of Kruje. Afterwards, he besieged the Venetian fortress of Shkodra. Despite the privations suffered by the defenders, they refused to surrender and Mehmed withdrew.

03 Mehmed led 30,000 troops into Albania and besieged the fortress of Kruje in June 1466. The Ottomans pillaged large swathes of the Albanian countryside in an effort to intimidate Skanderbeg. The superb Albanian general established a fortified camp outside Kruje from which to harass the besiegers. After 10 months the Turks raised the siege.

08 The First Ottoman-Venetian War ended in a victory for the Ottomans. The harsh terms of the Treaty of Constantinople signed in January 1479 required the Signoria to cede the Albanian strongholds of Shkodra and Kruje and the Greek islands of Euboea and Lemnos. In addition, the Venetians were required to pay 150,000 gold ducats in reparations.

05 The Ottomans launched a combined land-sea operation in 1470 against the major Venetian naval base on the island of Euboea. A fleet of 300 Turkish vessels secured the harbour at Chalcis. Mehmed's large army besieged Chalcis. After several failed attempts to storm the city, a traitor showed them the weakest section of the walls to exploit, and they captured it on 12 July.

02 Venetian Condottiero Sigismondo Malatesta landed at the fortress of Methoni in August 1464 and assumed command of 2,100 troops. A force of 12,000 Ottomans marched into Morea. They defeated the vanguard of Malatesta's army, forcing the remainder to evacuate.

01 The Ottoman army captured the Venetian fortress at Argos in Morea in April 1463, starting the First Ottoman-Venetian War. The Turks launched destructive raids against Venetian bases in southern Morea, such as Lepanto and Methoni. Venetian attempts to retake Argos and capture Corinth failed. The Venetians allied themselves with the Hungarians and feudal princes of Albania.

into the harbour, thus bypassing the great chain blocking the main entrance to the Golden Horn.

On 22 April teams of oxen and hundreds of men dragged 80 small and medium-sized ships on a track of greased logs over the hill and down to the waterway on the other side. It was a herculean task, but the Ottomans had skilled engineers and plenty of manpower. Mehmed then ordered a pontoon bridge constructed across the Golden Horn for a secondary attack on the walls overlooking the harbour.

Final assault

When rumours reached Mehmed in mid-May that a Hungarian army was marching to the relief of Constantinople, the sultan set 29 May for the final grand assault against Constantinople. Mehmed directed that assaults should be made against both the land and sea walls to stretch the defences to breaking point. On the morning of the attack, Emperor Constantine and Giustiniani assembled their

“THE OTTOMAN NAVY THAT ARRIVED OFF CONSTANTINOPLE TOTALLED 125 SHIPS, WHICH WAS FIVE TIMES THE NUMBER OF SHIPS THE BYZANTINES HAD IN THEIR HARBOUR”

best 2,000 fighters between the inner and outer walls in the centre of the land walls to fend off the Ottoman army's main attack.

Although the valiant Christians repulsed multiple assault waves, a small group of Ottoman soldiers found a secret entrance left unguarded near the Blachernae Palace. This constituted the first fortunate incident that led to the Ottoman victory.

50 Ottoman soldiers rushed up a set of stairs and captured a section of the wall. They then seized a tower and opened a gate for other Ottoman soldiers to enter the city. The Ottoman soldiers tore down the Venetian and Byzantine standards on the section of the rampart they

had captured and raised the Ottoman standard in their place.

About the same time, Giustiniani received a severe wound and quit the fight. This was the second incident that enabled the Ottomans to prevail. Seeing his departure, the defenders' morale sank. Constantine apparently died in the fighting, but his body was never found.

Although Mehmed had promised his soldiers three days of looting, the sultan only granted them one day of pillage. Mehmed entered the city in the late afternoon at the head of a victory procession that included his ministers, imams and janissaries. Following the city's conquest, Mehmed renamed it Istanbul.



The fall of Constantinople sent waves of panic through Latin Christendom, putting the Papacy, the Genoese and Venetians on edge in the years that followed, as the Porte began chipping away at their colonies in the Aegean and Black seas.

Enduring legend

Mehmed led 19 campaigns during his life, two-thirds of which were conducted in Eastern Europe. He was in the field constantly, moving back and forth between the Porte's western and eastern fronts. Ever since he was a boy Mehmed had dreamed of conquest and was determined to conquer Rome. Although this would prove out of reach, he nevertheless led Ottoman armies against an array of Christian foes in the Balkans. He annexed for the burgeoning Ottoman sultanate key regions that previously paid tribute, such as Albania, Serbia and Wallachia.

In 1456 Mehmed besieged Belgrade in Serbia. Janos Hunyadi, the principal commander for the Hungarians, moved to relieve the siege. Belgrade was a strong fortress, and Mehmed underestimated the difficulty he would have trying to conquer it. Hunyadi conducted a successful

"EVER SINCE HE WAS A BOY MEHMED HAD DREAMED OF CONQUEST AND WAS DETERMINED TO CONQUER ROME"

counterattack on 21 July 1456 against the besieging Ottoman army. The Hungarians surrounded and cut to pieces Mehmed's janissaries, who had infiltrated the fortress, and also used combustible materials to burn the janissaries in the ditches at the base of the walls.

The Hungarians fought their way to the sultan's camp. Mehmed drew his sword and waded into the attackers. His bravery was beyond reproach. In the furious fighting that followed he received a severe arrow wound in his thigh. The Turks fled in panic. Shortly afterwards, Mehmed ordered the execution of several of his generals. As for Hunyadi, he succumbed to an outbreak of the plague. Without the Hungarian general to come to its aid, Serbia was annexed in 1459.

"Put out like a candle"

One of Mehmed's top priorities after the conquest of Istanbul was to eliminate the

remaining Byzantine dynasts who might attempt to resurrect the Byzantine Empire. This included eradicating the remaining descendants of the Komnenos and Palaeologus imperial dynasties to ensure that they did not try to expand and retake former Byzantine territories now in the possession of the Ottomans. When Thomas and Demetrius Palaeologus, brothers of the slain Byzantine Emperor Constantine XI and rulers of Morea (Peloponnese), refused to pay their annual tribute to the sultan in 1460, Mehmed drove them into exile and annexed the region.

In 1461 Mehmed led an army of more than 100,000 into Anatolia to remove David Komnenos from power in the tiny Empire of Trebizond. The campaign would be noteworthy for the coordination of the Ottoman land and sea forces. One of Mehmed's strengths was his secrecy, which prevented enemies from receiving advance warning of an attack through deserters and spies. When one of his senior



The Ottoman bombards proved highly effective at blasting breaches in the thick landward walls of Constantinople during the 1453 siege

commanders accompanying the expedition asked where they were going, Mehmed replied, "If the hair of my beard knew of my plans, I would pull it out and burn it." He maintained strict secrecy while campaigning in Rumelia, too. For example, in 1466, as he marched through Bulgaria, no one knew whether his objective was Albania, Morea or Serbia. It turned out to be Albania.

The sultan led the army on a gruelling march through mountainous terrain in hostile territory to reach Trebizond. He captured the city after an 11-month siege that ended in August 1461. Afterwards, Mehmed imprisoned David Komnenos and his extended family. Two years later he ordered the execution of David and six of his seven sons. The youngest son, whose life was spared, was raised as a Muslim.

Mehmed strictly adhered to his policy of not allowing a prince to survive in a region that the Ottomans conquered. Following the fall of the Bosnian stronghold of Bobovac to Mehmed in 1463, King Stephen of Bosnia asked the sultan to spare his life. Mehmed granted his request. However, he did so deceitfully, for he did not honour his word to Christians. Stephen

was summarily executed. The king was "put out like a candle," quipped Mahmud Pasha, the Ottoman grand vizier.

In 1473 Mehmed would conduct another major campaign in eastern Anatolia. His objective was to nullify the threat posed by Uzun Hasan, the leader of the White Sheep Turcomans. While maintaining a tight grip on his army, Mehmed's large force crushed the Turcomans at Otlukbeli, capturing 3,000 prisoners in the process. On his return march to Istanbul, Mehmed ordered several hundred of the prisoners executed each day as a warning to other Turcoman tribes not to trifle with the Ottomans.

Worthy opponents

After removing the Byzantine dynastic threat, Mehmed turned his attention to eliminating threats to his Rumelian territories. He led his army north through the dark forests of Wallachia in 1461 where Vlad III 'The Impaler' Tepes had impaled thousands of Bulgars and Ottomans in an effort to terrify his foes. Vlad not only refused to pay tribute but also conducted frequent raids into Ottoman-controlled northern Bulgaria. Mehmed did not flinch at the horrors but remained tightly focused on his objectives. Mehmed ultimately drove Vlad into exile and struck an agreement with Vlad's more moderate brother Radu III, who became a loyal vassal.

Mehmed's determination to remain focused on his military objectives despite repeated setbacks is most evident in his effort to conquer Albania. In trying to secure the mountainous territory in 1466, he met his greatest foe next to Hunyadi. George Castriot, better known as Skanderbeg, was a former Ottoman governor who had switched sides three years earlier. After switching sides, Skanderbeg fiercely resisted Mehmed's efforts to subjugate feudal Albania. The Ottomans conducted 13 offensives against the Albanians during Mehmed's reign.

The Albanian offensives were part of the broader First Ottoman-Venetian War from 1463 to 1479. Following Skanderbeg's death in 1468, Mehmed ordered all of the Albanian strongholds destroyed or dismantled to remove the threat of guerrilla operations against Ottoman supply lines.

Mehmed the Conqueror expanded the Ottoman Empire with the addition of Albania, Bosnia, Morea and Serbia, thus setting the stage for his successors to invade Hungary. He also consolidated Ottoman territory in Anatolia with the conquest of Trebizond and Karamania.

He was determined, strong-willed and visionary. He was a cunning statesman, an excellent military engineer and an inspiring battlefield commander. Although he acted in ways that might be regarded in today's world as cunning and cruel, in truth they were similar to those exercised by comparable sovereigns in adjoining regions.

Mehmed certainly suffered his fair share of setbacks, such as the failed siege of Belgrade in 1456 and Rhodes in 1480. Yet at the same time he was able to win great victories under arduous circumstances. For his many and varied achievements, he belongs in the pantheon of the greatly feared and respected Ottoman sultans.

OTTOMAN NAVAL POWER

SULTAN MEHMED II EMBARKED ON A RAPID SHIPBUILDING PROGRAM TO PUT HIS FLEET ON PAR WITH THOSE OF THE LATIN MARITIME POWERS

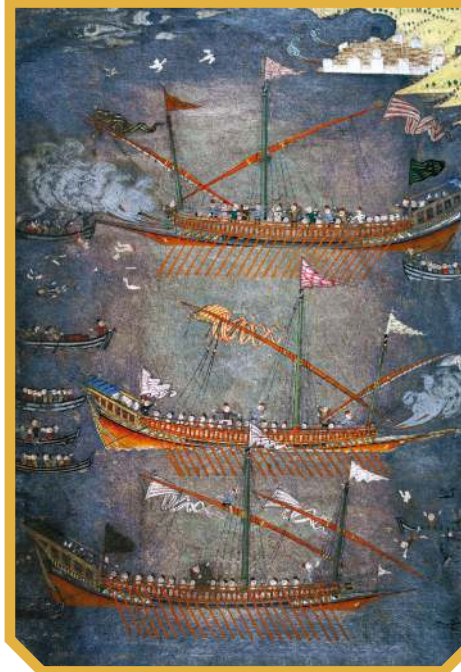
During Sultan Mehmed II's first decade of rule, he authorised a rapid naval construction program to counter the naval threat posed by Venice and Genoa. Mehmed ordered necessary raw materials to be brought to the shipyards from across the sultanate.

Employing shipwrights from Ottoman-controlled Greece to compensate for the lack of Turkish expertise, Ottoman shipyards at Gallipoli, Istanbul and Izmit built new galleys, fustae, brigantines and transport barges. Greek and Latin sailors from conquered colonies were pressed into service to crew the vessels. The result was a ten-fold increase, from 50 ships when he came to power in 1451 to 500 ships in the final years of his reign.

The Ottoman navy enabled Mehmed to project power and make conquests that would not have been possible without naval transport. For example, the Ottoman navy played a pivotal role in the conquest in 1475 of the Genoese trading centre of Kaffa in the Crimea.

The fleet not only transported troops to far-flung locations but also conducted raids. The expansion of the Ottoman navy caused great apprehension among the Venetians, who saw it as a threat to their trade and naval bases. It put them on notice that the Ottomans intended to challenge their dominance of the Eastern Mediterranean from that point forward.

Below: Ottoman galleys transported Sultan Mehmed II's troops on expeditions to conquer Latin colonies in the Black Sea region



1918

THE SPRING OFFENSIVE

PART II

Between April and July 1918 two skilled commanders, Ludendorff and Foch, traded blows along the Western Front. Could Germany have won the war in spring 1918?

WORDS PROFESSOR WILLIAM PHILPOTT

*German troops advance towards
the River Aisne, May 1918*

After 'Operation Michael' was halted in front of Amiens in early April 1918, General Erich Ludendorff would continue to rain blows on the Allied lines – four in all between April and mid-July. The first of these, 'Operation Georgette', struck against the British Second and First Armies to the south of the Ypres salient on 9 April, pushing back but not breaking the line around that symbolic town. 'Operation Blücher', which commenced on 27 May, overwhelmed Allied forces on the Chemin des Dames and saw German troops reaching the River Marne, which they had last crossed in 1914, before they were halted on its banks. 'Operation Gneisenau', from 9-15 June, pushed back French forces between Montdidier and Noyon but was soon successfully counterattacked. The final offensive, 'Marneschutz-Reims', launched on 15 July and attempted to break out of the Marne salient. The Germans were lured into a carefully set Allied trap. Ludendorff's blows were powerful but ill-coordinated, like the thrashing convulsions of a dying beast. His adversary, General Ferdinand Foch, understood how to contain them and how to catch his enemy off guard and strike back.

When Foch had been confirmed as Allied General-in-Chief in early April, British Prime

Minister David Lloyd George had asked him, "Mon Général, who should I bet on, you or Ludendorff?" and Foch had replied, "Me, because Ludendorff's task is much more difficult than mine. He has to beat me, and that he cannot manage." Foch's confidence in himself was not misplaced. He was the Allies' most experienced commander and would come to gain the trust of his fellow generals as he managed the defensive battle. Equally important, he was an offensively minded general, always on the lookout for the chance to strike back at the enemy while they were off balance. Foch carefully managed Allied reserves: "You know my methods; I stick a wafer here, another there, a third at the side... The Germans make scarcely any further progress. A fourth wafer and they will stop altogether," he once explained to Louis Louchet, the French minister of munitions. He

"LUDENDORFF'S TASK IS MUCH MORE DIFFICULT THAN MINE. HE HAS TO BEAT ME, AND THAT HE CANNOT MANAGE"

– Allied General-in-Chief Ferdinand Foch

combined this with a proper understanding of the dynamics of industrial battle, which ensured he had contained the German threat by summer.

Foch's first test came in the Battle of the Lys. On 9 April the German Sixth Army, supported by 30 captured Allied tanks, launched another surprise attack south of Ypres. The main blow fell on the Portuguese Expeditionary Force, whose front collapsed. By the end of the day the Germans had penetrated 9.5 kilometres (six miles) and crossed the River Lys, although British units on the Portuguese flanks fought hard and confined the breakthrough.

The next day German Fourth Army struck a second blow against the southern flank of the Ypres salient, storming the high ground of the Messines-Wytschaete Ridge, south of Ypres. Because the attacks fell in the British sector, moving French reserves to the threatened point would be more difficult. Moreover, Foch initially judged the attack to be a feint and expected Ludendorff to renew the offensive against Amiens with a more powerful blow further south at Arras. Therefore for some days he refused British commander-in-chief Sir Douglas Haig's entreaties for French reinforcements.

Haig's famous order of the day of 11 April reflected his anxieties. It stated, "Every position must be held to the last man: there must be no retirement. With our backs to the wall



believing in the justice of our cause each one of us must fight on to the end." Haig's and Foch's difference of opinion reflected their different responsibilities and viewpoints. Haig had to ensure the security of his front and the Channel ports behind it: Foch had to consider the situation along the whole Western Front. On reflection, Foch accepted the growing danger in the north. By 12 April French reserve divisions were on the move. 14 infantry and three cavalry divisions would be sent, but they would not enter the fight until 16 April.

Foch would keep other reserve divisions in hand for when the Germans struck at Villers-Bretonneux in front of Amiens on 24 April. To gain the time needed to deploy the French reinforcements, it was decided to withdraw the British line in front of Ypres (handing back the ground won at great cost during the Third Battle of Ypres the previous autumn), although that town, which had been defended since 1914, would not be surrendered. The Germans tried to advance south of Ypres towards the rail junction at Hazebrouck. Foch's counter-plan was to form solid flanks to the north and south of the German penetration and deploy fresh reserves on a succession of defensive lines to slow and eventually halt the German advance.

As with Operational Michael, the German offensive ran out of steam quickly. Thereafter fighting came to focus on the high ground of

"AT TIMES THE FIGHTING WAS FURIOUS AND THE ROAR AND DIN THROUGHOUT THE DAY IS BEYOND DESCRIPTION. THEY CAME OVER IN FOUR OR FIVE WAVES WITH FIXED BAYONETS. VERY FEW GOT BACK"



Above: An Allied command post on Mount Kemmel. This photo was taken on 23 April, two days before the Germans seized the hill

Mount Kemmel, south of Ypres. A renewed attack on 25 April, covered by an intensive bombardment of high-explosive and gas shells, blasted French troops off the hill, but the dogged resistance of French and British reserves effectively blunted the German thrust, and the offensive petered out by the end of April.

The sophisticated tactics of the first phase of an attack were increasingly abandoned as second-line divisions were thrown into the fight in an attempt to force a decision. Battles resumed the intensity and bloodiness of those of earlier years. On 29 April one British gunner officer recorded, "Throughout the whole of the northern battlefield they continued to hurl great masses of men against our line till evening. Not in a single spot did they succeed and are smashed right down the line. At times the fighting was furious and the roar and din throughout the day is beyond description. They came over in four or five waves with fixed bayonets. Very few got back." It was a human sacrifice that the German army could not afford at this late stage of the war.

Ludendorff's next blow fell against the Chemin des Dames ridge above the River Aisne, recaptured by the French army in autumn 1917. Here French Sixth Army commander General Denis Duchêne had refused to adopt the most recent defence-in-depth methods,

LUDENDORFF VERSUS FOCH

1918 SAW TWO MASTER STRATEGISTS TRY TO FIND THE KEY TO VICTORY

Generals Erich Ludendorff and Ferdinand Foch were two of the best commanders of the war. Both had extensive experience when they faced off in 1918. Ludendorff had learned modern tactics and battle planning on the Eastern Front, when he was chief of staff to General Paul von Hindenburg from 1914 to 1916.

When Hindenburg became Germany's commander-in-chief in September 1916 Ludendorff assumed the new role of first quartermaster general, responsible for German strategy and military operations. Ludendorff found adapting to the material-intensive warfare of the Western Front difficult after fighting the Russians. His first decision was to assume a more defensive posture, since Germany's armies were suffering heavily in the dual battles of attrition at Verdun and the Somme.

In spring 1917 he conducted a strategic retreat to newly built defence-in-depth positions – the Hindenburg Line – with a view to avoiding a further bloodletting like that of 1916. Foch had directed the Somme offensive, and from that experience he came to appreciate that the war would only be decided by a cumulative process of attrition carried out on such a scale and at such a rate that the enemy could not reconstitute their beaten formations. To that extent Foch saw the enemy's manpower to be the principal target of strategy, although morale, material and logistics were other factors

that had to be considered. He would not let his armies, whose own morale was shaky after 1917's battles, bleed themselves white in long attritional battles in the future. To deliver this strategy, appropriate tactics and operational methods – which Foch dubbed 'scientific battle' – had been developed on the battlefield in 1915 and 1916.

By 1918 large battles could be organised quickly and with the expectation of success, at least in their initial stages. Foch therefore planned, when the opportunity presented itself, to use a sequence of powerful, coordinated offensives all along the Western Front to break Germany's fighting power once and for all: "To embarrass the enemy

in the utilising of his reserves and not allow him sufficient time to fill up his units" as Foch explained to the Allied commanders-in-chief in July 1918. It was his understanding of the operational level of war – the use of battles to achieve pre-determined strategic ends – that gave Foch the advantage.

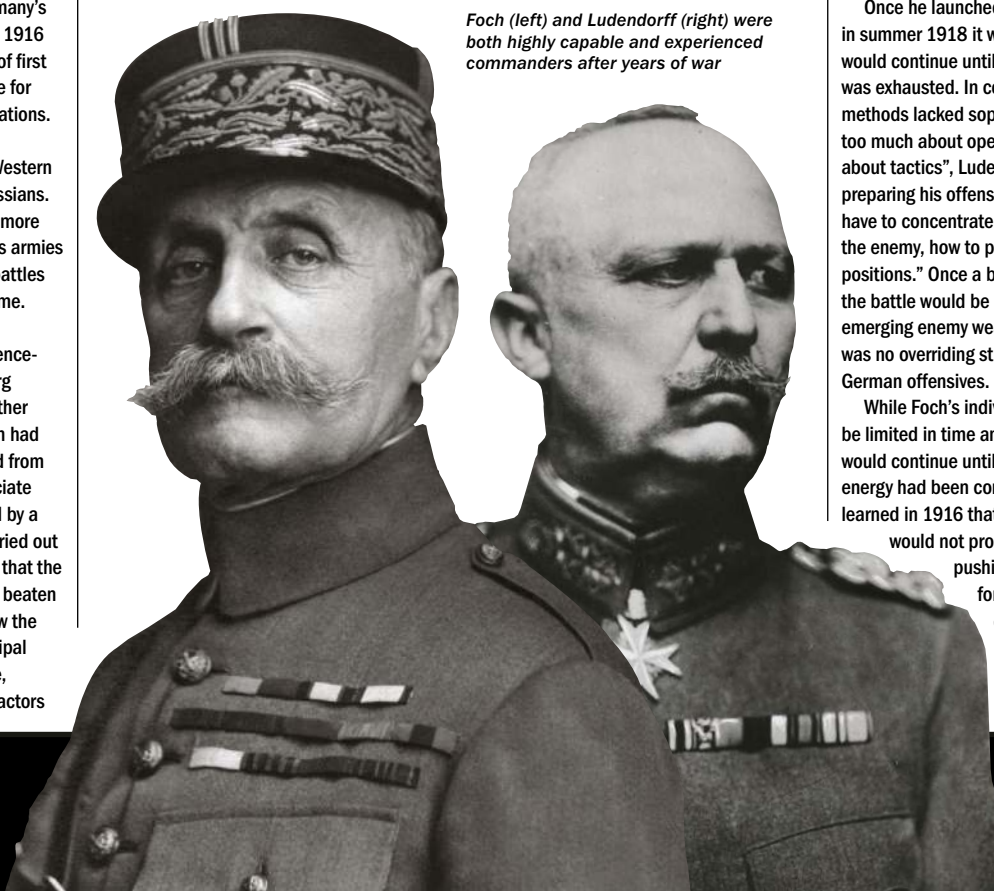
Once he launched his 'general battle' in summer 1918 it was his intention that it would continue until one or the other side was exhausted. In contrast, Ludendorff's methods lacked sophistication. "We talk too much about operations and too little about tactics", Ludendorff stated when preparing his offensive. "All measures have to concentrate on how to defeat the enemy, how to penetrate his front positions." Once a breach was made, the battle would be improvised to exploit emerging enemy weaknesses, but there was no overriding strategic purpose in the German offensives.

While Foch's individual battles would be limited in time and space, Ludendorff's would continue until the attack's energy had been contained. Foch had learned in 1916 that breaking through

would not produce a decision:

pushing back the enemy's forces, systematically destroying them wherever they were encountered, was the way to end the war.

Foch (left) and Ludendorff (right) were both highly capable and experienced commanders after years of war



A morale-boosting
French poster from
1918. By that point
in the war the poilu
was battered but
remained defiant



*Par deux fois j'ai tenu et vaincu sur la Marne.
Civil, mon frère,
La sournoise offensive de la "paix blanche" va t'assaillir à ton tour.
Comme moi, tu dois tenir et vaincre, sois fort et malin.
Méfie-toi de l'hypocrisie boche.*

Union des Grandes Associations Françaises
contre la propagande ennemie.

DEMBREZ, PARIS

V. de V. - Charles

not wishing to give up the strategic high ground that it had cost so many lives to capture. Not expecting an attack in that sector, French commander-in-chief Philippe Pétain had not pressed his subordinate.

The German hurricane bombardment, which opened on 27 May, fell on densely held front lines, some of which were held by depleted British divisions that had been moved to the sector to recuperate after facing the earlier German blows. "What a dreadful... bombardment," one French survivor wrote home, "The poor division... there's nothing left. As for the regiment, while we've been in the line 2,000 men have been reduced to just over 200." Pockets of shell-shocked survivors could not hope to stem the German advance, and there was no intensive resistance behind the front to match that of March and April because local reserves were destroyed in the early phase of the battle. Duchêne, who was quickly relieved of his command, had not taken the precaution to prepare the bridges over the River Aisne for demolition or to defend them with reserve formations, so once through the Allied front positions the German troops could advance quickly and relatively unopposed.

Foch now faced his greatest challenge – where and how could he stop the German advance, and with what? The decision was taken to strip the French front of reserve divisions and to redeploy the French forces supporting the British in Flanders and Picardy. British and Belgian forces would take over more of the defensive line at Ypres to free French reserves. Newly formed American divisions would also be sent into the line. Once again this would take time, but Foch appreciated that the momentum of the German advance would slow.

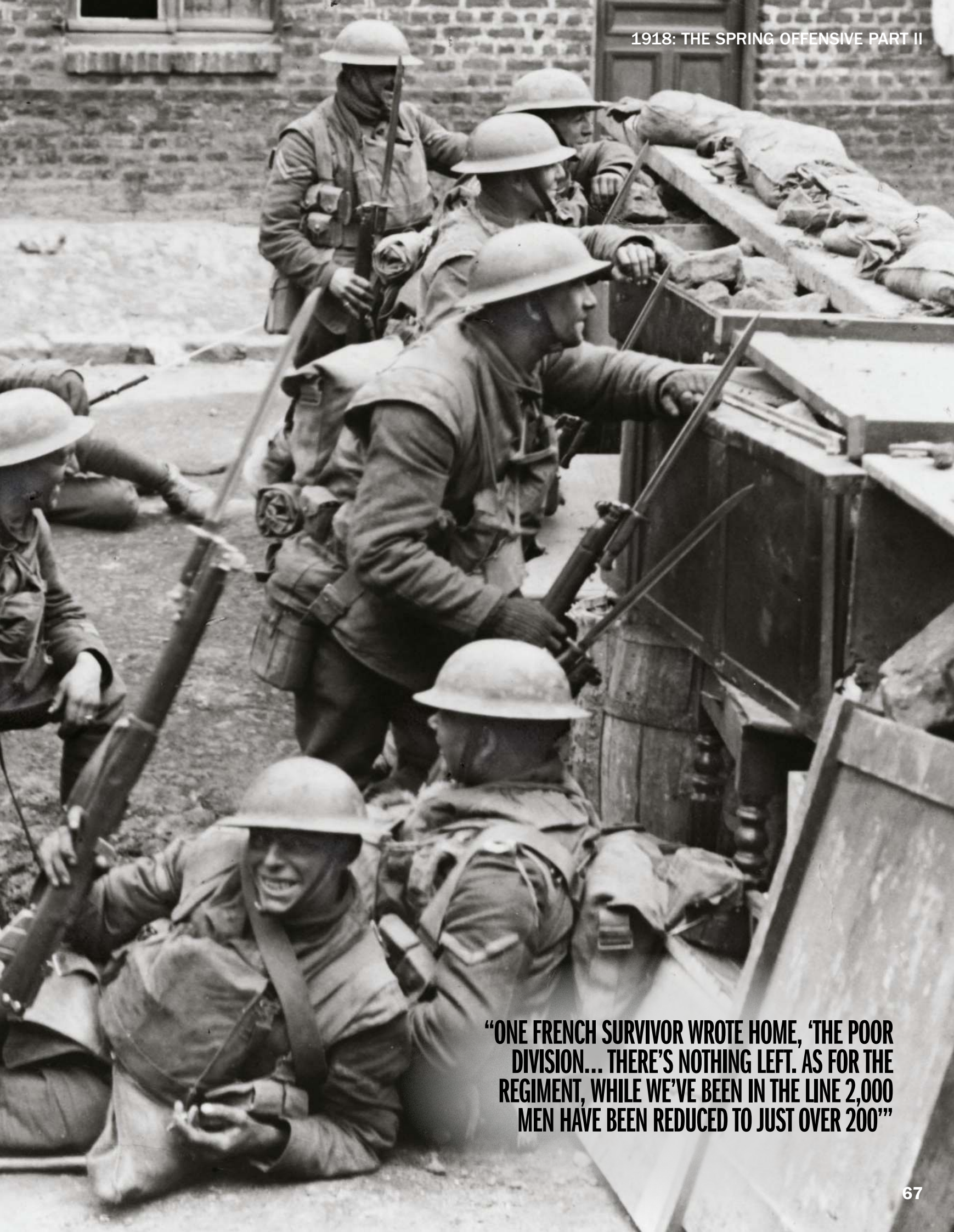
"FOCH NOW FACED HIS GREATEST CHALLENGE – WHERE AND HOW COULD HE STOP THE GERMAN ADVANCE, AND WITH WHAT?"

Below: British Lewis light machine-gunners take up defensive positions during the Battle of the Lys



British soldiers man a road barricade in Bailleul on 15 April 1918 during the Battle of the Lys. The town fell shortly after





"ONE FRENCH SURVIVOR WROTE HOME, 'THE POOR DIVISION... THERE'S NOTHING LEFT. AS FOR THE REGIMENT, WHILE WE'VE BEEN IN THE LINE 2,000 MEN HAVE BEEN REDUCED TO JUST OVER 200'"

The battlefield of the Lys at St Eloi, photographed from the air after the German bombardment

“WHEN LUDENDORFF LAUNCHED HIS FINAL OFFENSIVE IN THE MARNE ON 15 JULY, COMMITTING THREE ARMIES WITH 48 DIVISIONS AND 6,353 GUNS IN AN ATTEMPT TO FORCE A DECISION, FOCH WAS WELL PREPARED TO MEET IT”

The line of the River Marne through Château-Thierry was a natural obstacle that could be held. Here French and American forces consolidated a new defensive line, which checked the German advance. Meeting the Blücher Offensive had been a real test of Foch's authority over the other Allied generals, but he had held his nerve and used his powers of persuasion to organise a coalition defence. From that point on he had effective control of all Allied reserves, not just those of France.

The next German blow, to the west of the new Marne salient, was considerably weaker than the earlier ones: Ludendorff's own reserves were being used up in a series of increasingly attritional battles. German forces were drawn over the River Matz by General Georges Humbert's Third Army, which gave ground rather than lose men, and were then counterattacked in strength on their right flank by General Charles Mangin's Tenth Army on

11 June, after the Germans had spent their strength in the offensive. Mangin surprised the Germans with a new offensive method. There was no French preliminary bombardment, but instead his attacking infantry were supported by a creeping barrage and large numbers of medium tanks and ground-support aircraft. A second German blow from the western flank of the Marne salient on 12 June stalled, its momentum absorbed by French defence-in-depth. The offensive was effectively over within a week and was a clear Allied victory.

When Ludendorff launched his final offensive in the Marne on 15 July, committing three armies with 48 divisions and 6,353 guns in an attempt to force a decision, Foch was well prepared to meet it. East of Reims the momentum of the attack across the bleak Champagne battlefields of 1915 was easily absorbed by a well organised defence-in-depth. Rudolf Binding endured a hellish day in extreme

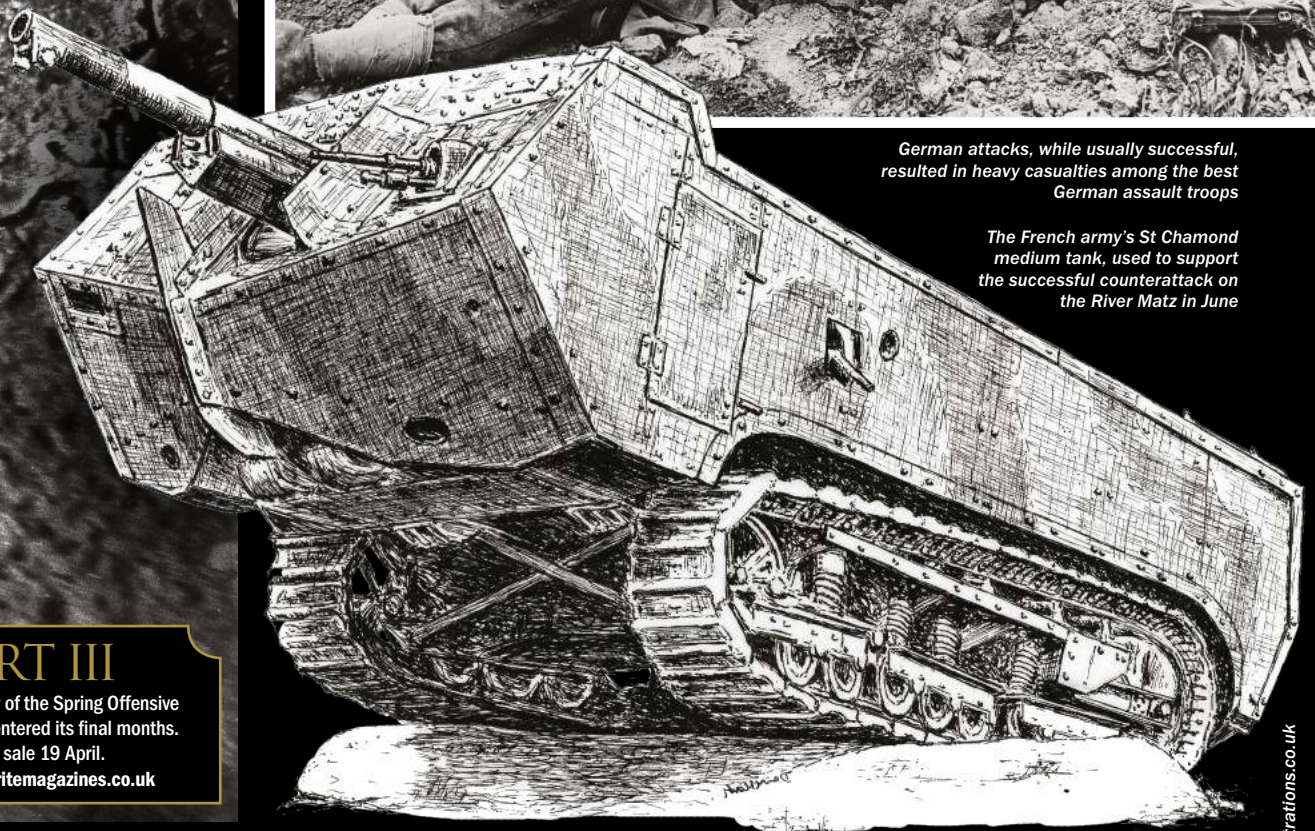
The River Marne presented a strong natural barrier to the German advance, especially once the bridges were destroyed





German attacks, while usually successful, resulted in heavy casualties among the best German assault troops

The French army's St Chamond medium tank, used to support the successful counterattack on the River Matz in June



IN PART III

Read how the final blow of the Spring Offensive was struck, as the war entered its final months. Issue 54 is on sale 19 April.

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heat: "No shade, no paths, not even roads; just crumbling white streaks on a flat plain... Into this the French deliberately lured us. They put up no resistance in front; they had neither infantry nor artillery in this forward battle-zone... Our guns bombarded empty trenches; our gas-shells gassed empty artillery positions; only in little hidden folds of the ground, sparsely distributed, lay machine-gun posts, like lice in the seams and folds of a garment, to give the attacking force a warm reception. After uninterrupted fighting from five o'clock in the morning until the night... we only succeed in advancing about three kilometres [1.8 miles]... We did not see a single dead Frenchman, let alone a captured gun or machine-gun, and we had suffered heavy losses."

West of Reims the initial attack fared better, with six German divisions establishing a bridgehead across the River Marne at Dormans. But the bridgehead, overlooked by

"WE DID NOT SEE A SINGLE DEAD FRENCHMAN, LET ALONE A CAPTURED GUN OR MACHINE-GUN, AND WE HAD SUFFERED HEAVY LOSSES"

Allied artillery positions, proved a death trap. French and American troops on the heights overlooking the Marne valley held the blow long enough for Foch to strike back with a pre-planned counterattack on the western flank of the Marne salient. A battle that had been promoted to the German troops as the 'victory offensive' – the final decisive thrust – ended in a general withdrawal back to the River Vesle as Foch's forces caved in the Marne salient.

These were large and costly battles, on a scale not seen on the Western Front since 1914. Between April and July the Germans had lost 326,000 and the Allies 386,000 troops, as well as vast amounts of equipment. Foch had won the first round of the campaign because his defensive methods were appropriate and adaptable while Ludendorff's offensive tactics were repetitive and predictable. Foch had lived up to his boast to Lloyd George, although, as he remarked at the time, it was one thing to stop the Germans and quite another to beat them. On the efforts of the spring and early summer, however, Allied victory would be founded and achieved before the year was out. Once allowed free reign to take the offensive himself, Foch would demonstrate that his armies were just as effective as Ludendorff's and that his superior understanding of operations would give him the edge.

Great Battles

KINGS MOUNTAIN

As the revolutionary war raged on, American militias, both Patriot and Loyalist, clashed in the struggle for Charleston, South Carolina

WORDS MARC DESANTIS

OPPOSING FORCES



VS



PATRIOTS

LEADERS:

William Campbell, Isaac Shelby, John Sevier, Joseph McDowell, Benjamin Cleveland, Joseph Winston, William Chronicle, James Williams

PATRIOT MILITIA:
c. 900

LOYALISTS

LEADERS:

Major Patrick Ferguson
LOYALIST MILITIA AND
REGULARS:
c. 900



American Patriots use the environment and their superior rifles to take on Loyalist forces on Kings Mountain

KINGS MOUNTAIN, SOUTH CAROLINA 7 OCTOBER 1780

It had been a bleak and unhappy 1779 for General Sir Henry Clinton, commander-in-chief of the British forces in North America, who wanted desperately to turn this troublesome conflict over to someone else and go home to England. Clinton insisted he needed two strong armies in America, not the one "pathetically small army" he actually had, but London had not heeded him, and his frustrations had swelled. But now he would strike a powerful blow against the colonial American rebels, or 'Patriots', as they called themselves. Sailing from New York harbour on 26 December 1779 with 8,500 troops in 90 transports, he headed south – his destination was rebel-held Charleston, South Carolina.

In transit, his fleet was hit by an improbable succession of wild storms. Regathering his scattered ships, Clinton made for the port city of Savannah, Georgia, which had fallen to British forces back in 1778. He did not reach it until 1 February. On 11 February he began landing troops some 48 kilometres (30 miles) to the south of Charleston, and then advanced on the city. The ensuing siege was carried out slowly but methodically, and eventually Charleston was brought within range of British artillery. On 9 May the bombardment began, and the city capitulated only three days later.

The fall of Charleston on 12 May was an unmitigated disaster for the Patriot cause and a glorious triumph for Clinton. In addition to the 5,000 prisoners taken, the capture also yielded 391 cannon, 6,000 muskets and a gargantuan supply of munitions and other military supplies. With Charleston safely in British hands, Clinton returned to New York in early June. He left behind Lord Charles Cornwallis as the commander of British forces in the American South.

The war in the South

The increased British attention on the South was part of the new strategy to break the stalemate that had settled over the American War of Independence to the north. With France and Spain now in the war on the side of the American rebels, London felt it necessary to safeguard other, perhaps more important, British interests in the Caribbean. So British strategic attention largely shifted southward, as did much of its army in the Thirteen Colonies.

Loyalists in the Carolinas were heartened by the dramatic royal success at Charleston. Coming out of the oppressive Patriot shadow they had long lived under, they encouraged the British to mount a full-scale conquest of the region. They also took the opportunity to exact revenge on the Patriots who had made their lives miserable prior to Clinton's descent. The war in the Carolinas, especially in the Back Country region, far inland of the Atlantic coast, took on the character of a civil war, filled with cruelties that only those who had once lived as neighbours can inflict on people – people from whom they had been suddenly sundered by taking opposing sides.

Cornwallis's primary task was to secure South Carolina and Georgia for the Crown. How he did this was left to his own discretion. Cornwallis chose not to remain on the defensive but took an active approach. He set up several outposts – at Savannah, Augusta, Cross Creek, Ninety-Six, Camden, Cheraw, Hanging Rock, Georgetown and Rocky Mount. Each outpost was intended to anchor the region more firmly under royal control.

For the time being there was little to stop him. The American presence in South Carolina after the fall of Charleston was meagre: just a single regiment, the Third Virginia

Continentalists under Colonel Abraham Buford. This was retreating northwards when it was overhauled by pursuing British forces. At the Battle of Waxhaws on 29 May, Lieutenant Colonel Banastre Tarleton, the 25-year-old British commander of the British Legion, an American Loyalist regiment, ran down and slaughtered the Third Virginia Continentalists as they attempted to surrender. Many of the Continentalists who were killed and wounded had already laid down their arms, though Buford himself escaped.

Though Tarleton had won the day, the event was marked out as an unforgivable atrocity, and the battle cries of "Remember Buford" and "Tarleton's Quarter" echoed among the Patriots who gathered in increasing numbers to fight on. Tarleton himself would become infamous as 'Bloody Ban'.

Back Country

If the Thirteen Colonies taken together were filled with recalcitrant, liberty-minded rebels bent on separating from Britain, then the Back Country of the Carolinas was one of the red-hot centres of such Patriotic feeling. The intractable nature of the region was due in large part to the kind of people who had made their home there. The place had been settled by people from England, Scotland and Germany, but most prominent were the immigrants and their descendants from northern Ireland, known in America as the 'Scotch-Irish'.

Their forefathers had been Presbyterians from the Scottish Lowlands who had been settled in the Plantation of Ulster starting in

"IN ADDITION TO HIS ROLE AS FLANK GUARD, HE WAS TO CLEAR THE UPLAND REGIONS OF PATRIOTS, A TASK THAT WOULD BE MORE EASILY ASSIGNED THAN FULFILLED"

the 17th century. They brought with them to the Back Country a martial spirit that had been forged in the fires of constant fighting along the Anglo-Scottish border, and then honed further in battles with the Catholic Irish in Ireland. On the American frontier, they then became expert 'Indian fighters' and waged incessant war against the native peoples they encountered there. They were self-reliant, independent and had scant affection for the king or his officials. Most would side with the Patriot cause during the War of Independence.

The partisan civil war shifted into a higher gear. A fierce fight took place at Ramsour's Mill on 20 June, and this was followed by the smashing of a Loyalist camp by Patriots at Williamson Plantation on 12 July. Patriot leader Thomas Sumter next led a force of Patriots against Loyalist-held Rocky Mount on

Above: The battle won, Major Ferguson's white charger was given as a prize of war to Benjamin Cleveland, whose own horse had been killed

1 August, where he was repulsed. He then attacked another Loyalist post at Hanging Rock on 6 August, and inflicted stinging losses on its garrison. None of these actions were large by European standards, being more akin to skirmishes than battles. But the ferocity of the encounters highlights the bloody nature of the civil war that had engulfed the Carolinas.

The regular Continental Army was not so successful as these Patriot warbands. It had a new commander, General Horatio Gates, the hero of the war-changing American victory at Saratoga in 1777. In the South he would not live up to his reputation. On 16 August 1780 his Continentalists clashed with Cornwallis's troops at Camden in South Carolina. Suffering from



The successful Siege of Charleston in 1778 gave the British a firm platform in South Carolina, but the Battle of Kings Mountain shifted momentum to the Patriot cause

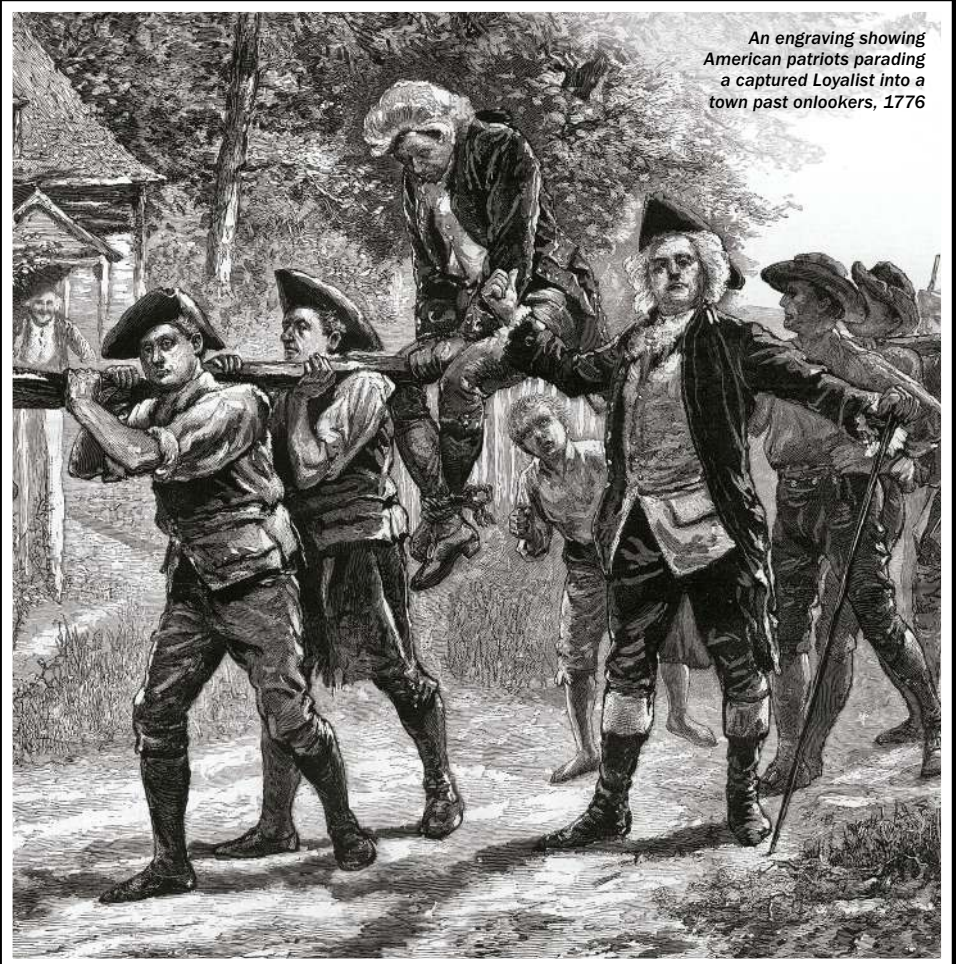
a collective bout of diarrhoea brought on by partially cooked food and a dose of molasses, his troops were handily routed by Cornwallis, with heavy losses.

Major Patrick Ferguson

With the Continental Army dispersed, Cornwallis moved northwards for North Carolina, intending to sweep the region clear of Patriot resistance. One British officer who had been seconded to Cornwallis by Clinton was 36-year-old Major Patrick Ferguson of the 71st Regiment of Foot. Ferguson had lost the use of his arm to a rebel bullet taken at the Battle of the Brandywine in 1777, and had been made inspector of militia by the commander-in-chief before he went back to New York.

The son of a Scottish attorney, Ferguson, like Tarleton, also supported a harder line against Patriot resistance in the Colonies. Unlike Tarleton, he earned a reputation for fair-mindedness and showed a willingness to listen to anyone, though he firmly insisted on the rightness of the Crown's cause. Ferguson was tasked with guarding Cornwallis's left, or western, flank as the main British army marched towards North Carolina. In addition to his role as flank guard, he was to clear the upland regions of Patriots, a task that would be more easily assigned than fulfilled.

To accomplish his mission, Ferguson raised militia bands from among the Loyalists in the Carolinas. He also had with him his own personal command, the American Volunteers, composed of soldiers recruited from other Loyalist regiments in New York and New Jersey.



An engraving showing American patriots parading a captured Loyalist into a town past onlookers, 1776

LOYALIST SOLDIERS IN THE REVOLUTION

MANY AMERICAN MEN ARMED THEMSELVES AND FOUGHT ALONGSIDE THE BRITISH ARMY

The American War of Independence bore many of the hallmarks of a civil war. Many Americans opposed the idea of separating from Great Britain and remained loyal to King George III. A large, but never large enough, number of these Loyalists were organised into provincial regiments and militia bands to fight on behalf of the Crown against the rebelling Patriots. Major Patrick Ferguson, who met his end at Kings Mountain, organised his American Volunteers in the second half of 1779 in New York. The recruits were picked men drawn from several other Loyalist groupings.

Another, much more renowned and infamous unit was the British Legion. Raised in July 1778 by Lord Cathcart, it then came under the command of Lieutenant Colonel Banastre Tarleton the next year. Comprised of infantry and cavalry, every one of the soldiers in the Legion could ride a horse. The British Legion participated in many engagements, including the siege of Savannah in the early

autumn of 1779 and the capture of Charleston, to name just a few. It would end the war at Yorktown in October 1781, where it surrendered to Patriot forces and was interned.

One of the most ferocious of Loyalist regiments in the north was the Westchester Refugees, better known as 'DeLancey's Cowboys'. This unit was formed by the New York Loyalist and former Westchester sheriff James DeLancey, and it conducted a bitter partisan struggle against Patriots in the 'neutral ground' of Westchester County, north of New York City.

The provincial regiments differed from the militia units, which were less formal in organisation. The provincial units were raised from all over the Thirteen Colonies. Many originated in the region of New York City, the main Loyalist stronghold in America and the headquarters of the British Army on the continent.

Militia was raised locally. Following the fall of Charleston, South Carolina, beginning in August 1780, loyal subjects of the king asked to "embody, arm and uniform themselves" into companies of militia for service on behalf of the Crown. Altogether, 11 companies totalling some 400 men were raised. Additional militia units were mustered at Camden, South Carolina and in North Carolina.

Once the war was over, many Loyalists, having experienced continuing friction with their victorious Patriot neighbours, opted to depart the United States, and settled elsewhere within the British Empire. Over 40,000, including soldiers and their families, would make new homes in Canada in the early 1780s.

**"MANY AMERICANS
OPPOSED THE IDEA OF
SEPARATING FROM GREAT
BRITAIN AND REMAINED
LOYAL TO KING GEORGE III"**



KINGS MOUNTAIN

04 CHAOS

The other Patriot divisions under Cleveland, Winston, McDowell, Williams and Chronicle have gotten into position around the northwestern end of the ridge. They too charge uphill. The whole of the ridge is engulfed in chaos.

06 FERGUSON AT BAY

Astride his white charger, Ferguson struggles to maintain his defence, but he is assailed on every side by Patriot militia that he cannot overcome. When two flags of surrender are raised by some of his men, he takes both down with slashes of his sword.

07 THE END

Beaten, Ferguson rejects surrender and launches a hopeless charge against the Patriot riflemen. He is riddled with bullets and slain. The surviving Loyalist troops surrender, and some of them are cut down by vengeful Patriots.

01 ON KINGS MOUNTAIN

Major Patrick Ferguson has camped his 900-strong army of Loyalist regulars and militia atop Kings Mountain, a 550-metre (600-yard) long ridge in South Carolina. He trusts to the natural strength of the ridge, and neglects to fortify his position.

Another group of American rebels had by now come into the picture. These were the Overmountain Men, so named because they lived largely on the western side of the Blue Ridge Mountains, which were themselves part of the far larger Appalachian mountain range. They had mounted several raids against British forces in the Carolinas after the fall of Charleston, answering a call put out by Colonel Charles McDowell, a North Carolinian militia commander.

The mountainmen's leader was Colonel Isaac Shelby, a Kentucky surveyor who had taken up arms to fight the British. He came down from the mountains bringing 200 horsemen with rifles, and together with 300 Georgia militia, led by Colonel Elijah Clarke, captured Thicketty Fort on 30 July 1780. After an inconclusive clash at Cedar Spring on 8 August, Shelby and Clarke, with the aid of Colonel James Williams, inflicted heavy losses on a Loyalist force at Musgrove's Mill on 18 August. When word of the Camden fiasco reached them, they headed home back over the mountains, with Ferguson trying but failing to catch up with them.

On 10 September Ferguson released from captivity a rebel by the name of Samuel Philips, who carried a threatening message from Ferguson to Shelby. The Scottish officer had said that if Shelby and the rest did not "desist from their opposition to British arms and take protection under his standard, he [Ferguson] would march his army over the mountains, hang their leader, and lay their country waste with fire and sword." If Major Ferguson believed that he could somehow intimidate these Overmountain Men with threats then he gravely miscalculated.

Ferguson's warning failed to have the intended effect. Instead, he handed a propaganda coup to the rebels. The 'fire and sword' message quickly made the rounds of the Overmountain folk, who were mostly of Scotch-Irish descent. They came to the conclusion that the best way to defend what mattered to them – hearth, home, and loved ones – was to take on Ferguson before he could move against them as he had threatened. So a call was made by Patriot

"IF MAJOR FERGUSON BELIEVED THAT HE COULD SOMEHOW INTIMIDATE THESE OVERMOUNTAIN MEN WITH THREATS THEN HE GRAVELY MISCALCULATED"

05 CHARGE AND RALLY

The musket-with-bayonet-armed Loyalists have little problem driving away the Patriot riflemen with their charges, but the Patriots rally again and again, hiding behind rocks and trees for cover. Their accurate rifle fire takes a heavy toll on the Loyalists. This pattern is repeated all over the ridge.

"FERGUSON REJECTS SURRENDER, AND LAUNCHES A HOPELESS CHARGE AGAINST THE PATRIOT RIFLEMEN. HE IS RIDDLED WITH BULLETS AND SLAIN"

03 ATTACK!

The divisions under Campbell, Shelby and Sevier launch their assault, yelling war whoops as they climb uphill. Major Ferguson orders troops to fight them at the southeastern end. The Patriots are easily dispersed by a Loyalist bayonet charge, but the Patriots quickly rally and counterattack.

02 PATRIOT APPROACH

A force of some 900 Patriots approaches Kings Mountain from the southeast, and gets within 0.4 kilometres (0.25 miles) before being seen by the Loyalists on top. Three divisions under Campbell, Shelby and Sevier gather around the southeastern end of the ridge.

- **PATRIOT ARMY INITIAL POSITIONS**
- **PATRIOT ARMY FINAL POSITIONS**
- **LOYALIST ARMY INITIAL POSITIONS**
- **LOYALIST ARMY FINAL POSITIONS**

leaders to men on either side of the Blue Ridge Mountains to meet at Sycamore Shoals on the Watauga River by 25 September, in what is today the state of Tennessee.

In pursuit of Major Ferguson

The summons brought forth hundreds of hardened frontier men willing to fight the British. Shelby had 240 with him; William McDowell delivered 160 militiamen from North Carolina; John Sevier came with 240 riflemen, while from Virginia came 400 men under William Campbell. Not all of them, of course, were true Overmountain Men, contrary to legend, but the mountaineers formed the hard core of the miniature army. With the battle cry of "The sword of the Lord and of Gideon!", this force of 1,040 riflemen rode off on 26 September from Sycamore Shoals to find Major Ferguson and his Loyalist militia.

The first waypoint was Quaker Meadows in modern North Carolina. Slowed by deep snow as they crossed the Blue Ridge Mountains,

they reached it on 30 September, and picked up several hundred reinforcements from North and South Carolina. But two of their original number had gone missing and had likely deserted to the British. Ferguson was thus bound to know that they were coming. They also knew that they needed an overall commander, and elected William Campbell, an enormous red-haired man of Scottish descent, who stood 1.98 metres (6.5 feet) tall, to be their general. The other captains present were all experienced fighters too, many having battled Native Americans before the war.

On 3 October the Patriots reached Gilbert Town, where Ferguson had earlier released Samuel Philips. Ferguson was long gone, having left on 27 September, and he knew that the Overmountain Men, who he called "Back Water men", and even less flatteringly "mongrels", were on the way. On 30 September he was visited by the two deserters from the pursuit force, who gave him valuable intelligence about the enemy force seeking him out. Ferguson sent messengers to his commander, Lord

PATRICK FERGUSON



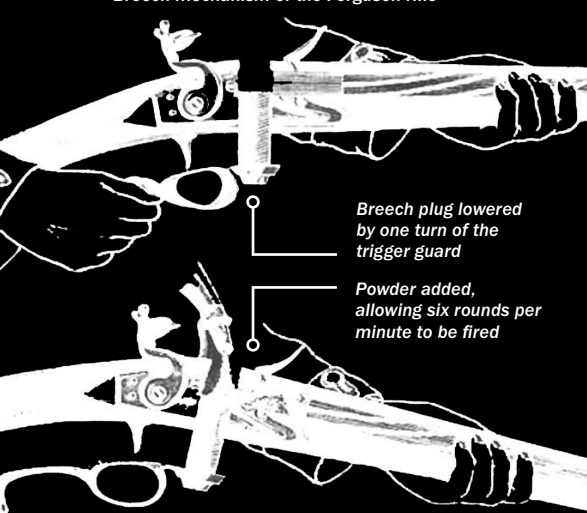
FERGUSON WAS BOTH A SOLDIER AND AN INVENTOR, AND EXPERIMENTED WITH INNOVATIVE BREECH-LOADING RIFLES

Perhaps influenced by the extraordinary accuracy of the American frontier rifle, in the 1770s, Ferguson had begun to experiment with a new type of breech-loading rifle. Ordinarily firearms of the day, whether smoothbore muskets or rifles, had to be loaded from the muzzle, and the operator had to stand to do this. A breech-loading rifle promised to be faster to load and could be loaded while prone, leaving the shooter less vulnerable to enemy fire. Also, due to the grooves cut into the inside of the barrel, which imparted a spin to the outgoing bullet, a rifle was much more accurate than a smoothbore musket, which was inaccurate beyond about 70 metres (80 yards).

A Ferguson rifle could be fired six times a minute, an extraordinary boost in firepower. Ferguson received a patent for his new weapon, which was an improvement on a previous breech-loading design, as well as an order for 100 copies by the British Army. Coming to America, he and the small corps of sharpshooters he formed, armed with the Ferguson rifle, saw action on 7 September 1777 at the Battle of Brandywine. There he lost the use of his right arm when he was struck in the elbow by a bullet, and his corps of riflemen was subsequently disbanded. His rifle was never adopted for widespread use by the British Army.

At Brandywine, Ferguson figured in one of the more fascinating 'what ifs?' of the American War of Independence. Just a short distance away, Ferguson spotted a senior American officer. He could have readily put at least half a dozen shots into the man, Ferguson knew without doubt, but the officer had his back turned to him, and Ferguson refused to fire. Only after the battle did Ferguson learn, he claimed later, that he had none other than General George Washington, commander-in-chief of the rebel Continental Army, at his mercy. There is some doubt as to whether Ferguson actually saw Washington – it may well have been some other American officer on the other side of the field. Nevertheless, it is worth pondering how the outcome of the war might have differed had Washington perished that day.

Breech mechanism of the Ferguson rifle



Cornwallis, at Charlotte, North Carolina, asking him to send reinforcements immediately.

Ferguson stayed a step ahead of those following him, going with his men to encamp on 4 October at the plantation of a friendly Loyalist. The leaders of the Overmountain Men were dismayed at having lost the scent of their quarry, and decided to take a gamble to catch the elusive major. They took just 700 of their number and mounted them on the best horses. These would ride hard for Cowpens, 34 kilometres (21 miles) to the southeast. They would either run into Ferguson or obtain solid intelligence as to his whereabouts. They could also swing northeast and continue their search.

Coming to Cowpens on 6 October, they ransacked the home of a local Loyalist farmstead for food, but the man had no knowledge of Ferguson's location. Of some consolation was the arrival of 400 trailing men under Colonel James Williams. Ferguson's heading was, however, revealed when a Patriot spy, a crippled man named Joseph Kerr, appeared. Kerr had used his disability to obtain entry into the Loyalist camp under the pretence of finding shelter. Kerr had only recently been with Ferguson's troops, and he knew that they were headed for a 550-metre (600-yard) long, 18-metre (60-foot) high ridge named Kings Mountain, where they planned to make camp.

The Loyalists had done just as Kerr had said, and had camped atop the foot-shaped ridge. The day before the battle, Ferguson sent another message to Cornwallis requesting reinforcements. "Three or four hundred good soldiers, part dragoons, would finish the business," he assured. Those reinforcements would never come.

Battle of Kings Mountain

To catch up with Ferguson, the Overmountain Men again reduced their force in size, this time to 940, and put them on their best horses. In this band were 200 riflemen under William Campbell, with another 120 riding with Isaac Shelby; 120 came with John Sevier; 100 with Benjamin Cleveland; 90 followers rode beside Joseph McDowell; and 60 men were with frontiersman Joseph Winston. In addition, there were 100 South Carolinians led by Edward Lacey and William Hill. This conglomerate force was rounded out by men from Georgia and elsewhere.

Ferguson's force on Kings Mountain was of roughly the same size. He had a small corps of provincial Loyalist regulars, his American Volunteer regiment. It was composed of picked men drawn from other Loyalist regiments, such as the King's American Rangers, the Queen's Rangers and the New Jersey Volunteers. These were comparable in quality to British regular troops. The bulk of his force, however, was made up of 800 militiamen from across the Carolinas. All present, Patriot and Loyalist alike, were from the Colonies, and Ferguson would be the only Briton to take part in the battle.

There was, however, one major difference between the Patriots and the Loyalists, and that was in how they were armed. Ferguson's men carried the ubiquitous 'Brown Bess' smoothbore musket. For close quarters, their muskets were fitted with bayonets. The Overmountain Men and their comrades, in contrast, were equipped with the accurate

"CAMPBELL'S MEN WERE THE FIRST TO THE SUMMIT. 'HERE THEY ARE!' CAMPBELL SHOUTED. 'SHOOT LIKE HELL AND FIGHT LIKE DEVILS!'"

American frontier rifle, which could not accept a bayonet.

The Patriots began their approach march to Kings Mountain at 8.00pm, and rode through the night and the rain-soaked morning. They arrived at their destination at 3.00pm on 7 October, the sound of their march muffled by the sodden leaves that lay on the damp earth. The Patriots came up from the direction of the 55-metre (60-yard) wide southeastern heel of the foot-shaped ridge, and closed within half a kilometre before they were spotted. Colonel Shelby's men formed a column in the centre. On their immediate right were the men with Campbell and Sevier. Further to the right were Winston and McDowell's militia. To the left of Shelby came a long column of militia, with men following Major William Chronicle in the lead, and those of Cleveland and Williams behind. Shelby, Campbell and Sevier took up position at the southeastern end of the ridge, while the rest of the men went around the sides and surrounded the Loyalist position.

The Patriots began their climb up the slopes of the ridge, with each group going for the top as best as they were able. Though Ferguson's troops on top of Kings Mountain had the advantage of higher ground, he had not ordered them to improve their position with field fortifications. This was a terrible oversight, since the existence of even elementary defences would have made the Patriots' task all the harder. Campbell's men were the first to the summit. "Here they are!" Campbell shouted. "Shoot like hell and fight like devils!"

The Overmountain Men began their war-whoop, which they had learned from the Native Americans they so often fought. The Loyalists, with their main camp at the 110-metre (120-yard) wide northwestern end of the ridge, were now alert, and drums called the men to arms. Ferguson and Captain Abraham de Peyster, a New Yorker of Huguenot ancestry and the second-in-command, set about putting their men into fighting formation. "This is ominous," de Peyster said to Ferguson, noting the unsettling rebel war cries. Ferguson ordered some of his men to form a three-sided square at the southeastern heel of the ridge, and they unloaded volleys into the oncoming Patriots.

The Overmountain Men were not easily turned aside, and used their frontier-honed skills to hide behind rocks, ravines and trees. With their rifles and superb marksmanship, they returned fire with lethal effect. Ferguson had his men launch a bayonet charge, and the bayonet-less Patriots gave way, heading back down the slope of the ridge.

Campbell rallied his men, and they fired on the Loyalists as they made their way back up the slope. Shelby rallied his militia also, and these too fired on the Loyalists on their march up. Three bayonet charges were made against the Patriots, each successfully knocking them

Though defeated, Ferguson would not countenance surrender, and died in a hail of Patriot bullets



down the slopes. But on each occasion, the Patriots returned to the fight, shooting at the Loyalists as they retreated. Ferguson's decision not to build earthworks to protect his troops had come back to haunt him. Perhaps he had trusted the trees to provide protection, but these ironically provided excellent cover to the skirmishing Patriot militiamen as they swarmed up the slope. The Patriots held one other advantage. The Loyalists were on higher ground, and so their shots tended to miss high as they fired down upon the advancing Patriots.

Ferguson raced from position to position on the ridgetop, guiding his soldiers about with blasts on his silver whistle. His task was nearly hopeless, as he was being assailed from as many as eight different directions. While Campbell, Shelby and Sevier's men held his attention in the southeast, the other Patriot groups under Cleveland, Chronicle, McDowell, Winston and Williams had worked their way around and begun their own attacks uphill.

The pattern of charge and counterattack repeated itself on all sides of Kings Mountain. Captain Alexander Chesney, a Loyalist officer from South Carolina, would write afterwards that this sequence continued "for near an hour, the mountaineers flying when there was danger

"FERGUSON RACED FROM POSITION TO POSITION ON THE RIDGETOP, GUIDING HIS SOLDIERS ABOUT WITH BLASTS ON HIS SILVER WHISTLE"

of being charged by the bayonet, and returning again as soon as the British detachment had faced about to repel another of their parties."

By now the Patriots held the heel of the ridge fast. In a last-ditch defence of his camp on the opposite, northwestern end, Ferguson had his remaining men form a square. These were hammered by the fire of the surging American riflemen, and their ranks began to falter. Ferguson refused even the thought of capitulation. When two of his units raised flags of surrender, he cut them down immediately with his sword. He would never "yield to such damned banditti", he cried. With a handful of men and his sword in hand, he made a hopeless charge into the teeth of the Patriot riflemen. He was hit several times and fell dead from his white charger, but was pulled away from the continuing carnage, his foot caught in his stirrup.

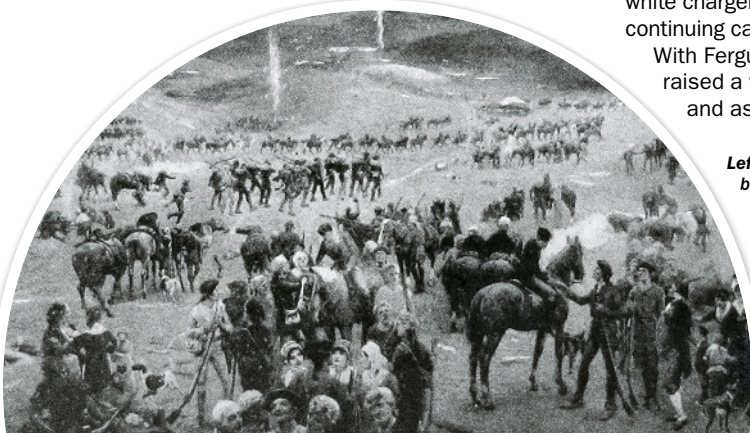
With Ferguson dead, Captain de Peyster raised a white flag to signal his surrender and asked for quarter for his men. For a

while the Patriots, their blood up, vented their hatred and anger on the battered Loyalists, yelling, "Tarleton's quarter" as they took their vengeance. It required some effort on the part of the rebel captains to stop their men from butchering the defeated enemy.

"Ferguson and his party are no more in circumstances to injure the citizens of America," William Campbell would report days later. Loyalist losses were far heavier than those incurred by the Patriots. Including their commander, they suffered 157 killed and 163 wounded. 698 were taken prisoner. Of the Patriots, 28 were slain, including Colonel James Williams and Major William Chronicle, and 64 were wounded. In an ugly denouement, nine of the Loyalists were hanged after a hurried trial by vindictive Patriots. Many of the prisoners would escape the custody of their captors not long after the battle.

Notwithstanding Major Ferguson himself, the Battle of Kings Mountain was the largest all-American engagement of the war, and the ferocity with which it was fought was a testament to the hard feelings unleashed when neighbour fought against neighbour in the civil war-like conditions in the Carolinas.

Though the forces involved were tiny, the outcome had an outsized impact on the larger war. It lifted Patriot morale enormously after the dark months following Charleston, and it was also the end for the Loyalist cause in the Back Country. Strategically, it forced Lord Cornwallis to halt his move into North Carolina and march back to South Carolina. When he returned to North Carolina months later, the Continental Army had recovered, and the campaign would be much harder for him, ending in Cornwallis's defeat at Yorktown in 1781.



Left: Angered by Major Ferguson's threat to bring "fire and sword" against them, the men on the western side of the Blue Ridge Mountains gathered at Sycamore Shoals before heading off for a showdown with the major

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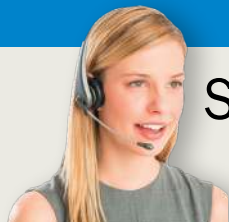
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STRIKING FROM THE SHADOWS

This year the National Army Museum presents *In The Shadows*, taking visitors on a journey through the missions, equipment and heroic stories of Britain's special forces

WORDS GAVIN MORTIMER

World War II was a conflict that threw up opportunities for innovative and aggressive young soldiers. With rapid advances in transport, communication and weaponry, the warfare was technologically far removed from the static slaughter of the Western Front in World War I. No country exploited these advances as quickly and as effectively as Britain, which, with the encouragement of Prime Minister Winston Churchill, formed its first special forces units in 1940.

Not all the special forces units to emerge from World War II were trained to kill. Some were reconnaissance units and others gathered

intelligence, but whatever their function they undertook their role with a professionalism that created the template for subsequent generations of special forces.

A new exhibition at the National Army Museum, entitled *In The Shadows*, explores the history of Britain's special forces, from the present day back to World War II when Churchill ordered his chiefs of staff to raise units of specially trained soldiers that could "butcher and bolt".

Here are just a few of the spectacular objects on display at the museum, as well as some of the soldiers and missions that were instrumental in the SAS's nascent years and beyond. For more information on the National Army Museum, please visit www.nam.ac.uk



An original WWII-era knife used by LRDG, on display at the National Army Museum

MEMORIES OF THE 'PHANTOM MAJOR'

STIRLING AND THE SAS GO IT ALONE IN THE NORTH AFRICAN DESERT

On the night of 26 July 1942 an incongruous column of heavily armed jeeps bumped across the Libyan desert. There were 18 vehicles in all, commanded by Major David Stirling, the 26-year-old Scot who the previous July had convinced Middle East Command in Cairo to allow him to raise a 66-strong unit called L Detachment of the Special Air Service Brigade.

Initially formed as a parachute unit, it had evolved into a guerrilla force that was transported to targets in the back of trucks driven by the Long Range Desert Group (LRDG). On this evening, however, the men were going it alone, directed to the isolated desert airfield of Sidi Haneish by Mike Sadler, a former LRDG navigator.

It was the first time the SAS was operating independently of the LRDG, and Stirling was desperate to prove that they could thrive as a self-sufficient force.

There were other reasons, too, for the decision to no longer hold the hand of the LRDG. In the first six months of 1942 the SAS had destroyed 143 enemy aircraft, and Axis forces had consequently strengthened their airfield's defences. No longer could the SAS simply stroll onto landing strips, place bombs on wings and then melt into the night to be collected by the LRDG at a pre-arranged RV.

"Stirling had a very good social manner and also a compelling personality," said Sadler, at 97 the only member of L Detachment still alive. "He managed to make one feel you were the only person who could possibly do it, that kind of effect, but I also slightly felt he was thinking of something else at the same time."

Sadler recalled the stress he felt as navigator as he guided the force the 89 kilometres (55 miles) north to Sidi Haneish. "There was always the worry you wouldn't pull it off," he said. "There was somehow a lot of pressure on that one because it was a big party and it had a lot of key folk on it."

Sadler's navigation was faultless, and the SAS arrived at the perimeter of Sidi Haneish in the early hours of 27 July. The men formed up as they had rehearsed in the previous days, Stirling's jeep the point of an arrow with one vehicle either side and level with his rear wheels. The remaining 14 jeeps followed in two columns, spaced 4.5 metres (five yards) apart, each one carrying four Vickers machine guns.

The jeeps trundled onto the airstrip at barely three kilometres per hour (two miles per hour), their speed in inverse proportion to the rate of fire from the Vickers – each gun pumping out 1,200 rounds a minute. The Italian defenders were overwhelmed by the shock and awe that suddenly emerged from the darkness. They ran screaming for cover as behind them Messerschmitts, Junkers, Stukas and Heinkels burst into flames.

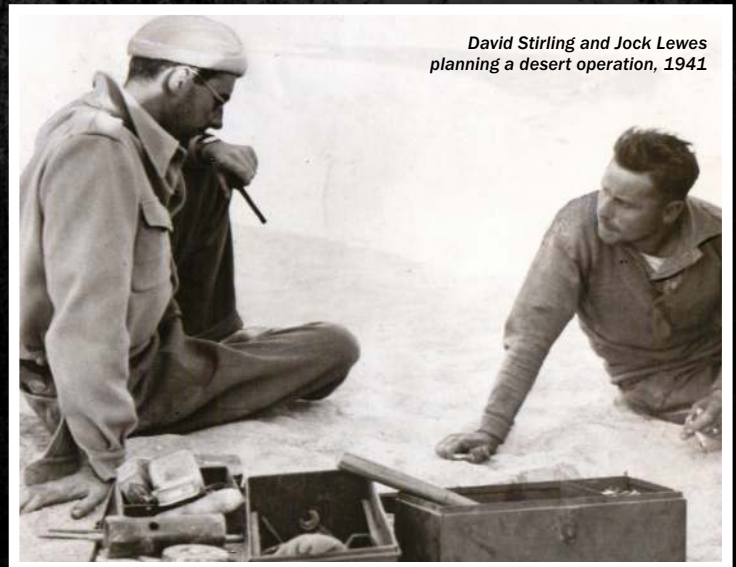
The Italians gathered their senses enough to return fire as the raiders wheeled and made for the desert. Three jeeps were put out of action, one man was killed, but the SAS left behind a scene of pandemonium – 18 aircraft destroyed, 12 damaged and dozens of dead men.

"The whole thing was very impressive and I had a ringside view of the tracer fire and the aircraft going up," said Sadler. "But going on an operation, it wasn't the raid itself you worried about, it was how the hell were we going to get away afterwards because the Germans were like bees when chasing us".

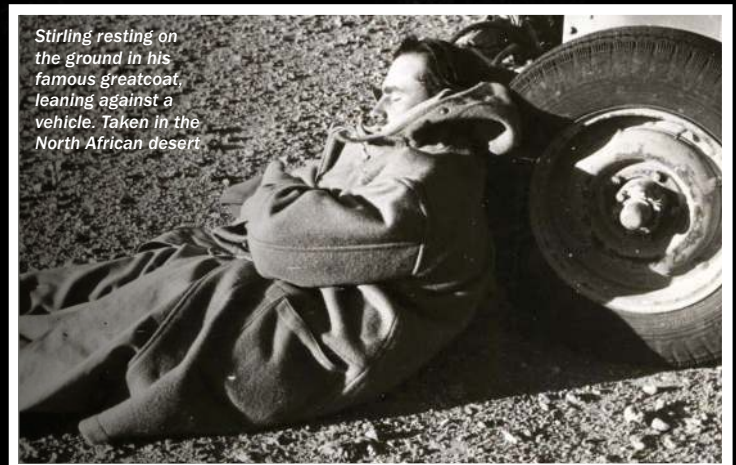
The SAS split into small groups for the return journey in the hope it would make them less of a target

for enemy aircraft. One patrol was attacked and a man was killed, but the rest made it safely back to base. No wonder the Germans dubbed Stirling 'the Phantom Major'.

Right: A Sun compass, used by the LRDG c.1940



David Stirling and Jock Lewes planning a desert operation, 1941



Stirling resting on the ground in his famous greatcoat, leaning against a vehicle. Taken in the North African desert.



Mike Sadler (centre) served with Stirling during his time in North Africa

"THE ITALIAN DEFENDERS WERE OVERWHELMED BY THE SHOCK AND AWE THAT SUDDENLY EMERGED FROM THE DARKNESS. THEY RAN SCREAMING FOR COVER AS BEHIND THEM MESSERSCHMITTS, JUNKERS, STUKAS AND HEINKELS BURST INTO FLAMES"



Former member of the wartime French resistance
Clodomir Pasqueraud (right) presenting Major Herbert
Hasler (1914-1987) with a bottle of cognac at a reception
at the Royal Marines Volunteer Reserve headquarters,
Shepherds Bush, London, 16 June 1961

**"THEY ATTACHED THEIR
MAGNETIC MINES TO THE
HULLS OF SIX SHIPS,
CRINGING AT THE 'CLUNK' THAT
THEY MADE ON CONTACT, AND
THEN WITHDREW, HAVING SET
THE TIMERS FOR NINE HOURS
AND 15 MINUTES"**

MAJOR HERBERT 'BLONDIE' HASLER, DSO & THE COCKLESHELL HEROES

HERBERT HASLER JOINED THE ROYAL MARINES AND PERSONALLY PLANNED AND LED A DARING COMMANDO OPERATION AGAINST AXIS SHIPPING IN BORDEAUX HARBOUR

A keen sportsman, Blondie was commissioned into the Royal Marines and served with them throughout the war. In post-war life he achieved global recognition as a single-handed sailor.

It was only once the Royal Marines were aboard the submarine HMS Tuna and heading across the Channel that 'Blondie' Hasler told them their mission. A gifted sailor who had been badgering his superiors for months to raise a small naval commando unit, Hasler revealed to his men that they were on their way to attack German merchant shipping at anchor in Bordeaux, an operation – code-named Frankton – that entailed paddling 145 kilometres (90 miles) up the Gironde, laying up during daylight on isolated stretches of the fast-flowing river. Once at Bordeaux, explained the 28-year-old Hasler, they would attach limpet mines to the hulls of the fast blockade runners that shipped German supplies to Japan.

One of the marines, Norman Colley, recalled that they all took the disclosure in their stride, despite the nature of the operation: "We knew it was supposed to be dangerous... we were all about 20 years of age so things like that didn't bother us," he said. "The lads accepted it very well. Nobody expected to get back off it – it was a suicide mission."

Hasler had been honest with his men from the moment he advertised for volunteers for a

"hazardous service". He was after single men with no children, asking each volunteer, "Do you realise that your expectation of a long life is very remote?"

Having injured his ankle during the four months of training that preceded the mission, Colley was the operation's substitute, on board only in the event that one of the 12 marines fell sick at the last minute. None did, and he remembered the "very queer feeling when you see them going away and you know there's not much hope".

Colley knew the men were as ready as they could be for the mission. The training – canoeing, swimming, navigation and route marches – had instilled in the marines a toughness and confidence that would stand them in good stead. Nonetheless, what they needed above all was luck.

Unfortunately that was in short supply from the moment the submarine surfaced 16 kilometres (ten miles) from the mouth of the Gironde on the night of 7 December 1942. One of the six collapsible canvas canoes – nicknamed 'Cockles' – was damaged as it was brought up on deck. Its occupants, William Ellery and Eric Fisher, were stood down, bitterly disappointed that their canoe was unseaworthy.

The other ten men launched their five canoes into the chill, dark waters of the Bay of Biscay

without mishap, but they were soon in trouble. A tidal race guards the entrance to the Gironde, forming short, steep waves as the flood tide enters the shallows. One canoe capsized, then another, reducing the raiders to three in a matter of hours.

Three canoes soon became two when the craft crewed by Lieutenant John MacKinnon and Marine James Conway disappeared in the dark, probably having broken up in a collision with an object underwater. That left just Hasler and Bill Sparks, and the canoe containing corporal Albert Laver and Marine William Mills.

Their arms and shoulders exhausted by paddling in the strong currents, the four men finally reached their target on the fourth night, having spent the daylight hours hiding behind the mudbanks and reeds of the riverbank. They attached their magnetic mines to the hulls of six ships, cringing at the 'clunk' that they made on contact, and then withdrew, having set the timers for nine hours and 15 minutes.

Then it was 'every man for himself', and Hasler and Sparks embarked on an overland adventure that culminated with a trek through Vichy France to Spain and ultimately Gibraltar. Their comrades failed to return, and it took many years for the truth to be known of how two had died of hypothermia and the rest were captured and executed.

"THEY ALL TOOK THE DISCLOSURE IN THEIR STRIDE, DESPITE THE NATURE OF THE OPERATION: 'WE KNEW IT WAS SUPPOSED TO BE DANGEROUS... WE WERE ALL ABOUT 20 YEARS OF AGE SO THINGS LIKE THAT DIDN'T BOTHER US,' HE SAID. 'THE LADS ACCEPTED IT VERY WELL. NOBODY EXPECTED TO GET BACK OFF IT – IT WAS A SUICIDE MISSION'"



Above: These contain corrosive acid of different strengths for detonating mines. The colour of the ampoule defines the time that the fuse takes to activate. In five degrees temperature, the red ampoule takes six and a half hours to detonate the mine, while the violet takes eight and a half days. The ampoule breaks when it is placed in the mine, corroding the metal that holds the explosive charge



Right: A limpet mine, similar to those used during the operation

— BLAIR 'PADDY' MAYNE, DSO AND THREE BARS —

AN IRISH RUGBY INTERNATIONAL BEFORE THE WAR, HE JOINED THE SAS IN JULY 1941 AGED 26 AND SERVED WITH THEM FOR THE REST OF THE WAR, COMMANDING ONE SAS FROM 1943-1945

The men of the Special Air Service knew they were in for a fight when they drove into northern Germany in the second week of April 1945. Their operation, code-named Howard, was to provide reconnaissance for the Fourth Canadian Armoured Division as they advanced on the medieval city of Oldenburg. But waiting for them, concealed in the hedgerows and woods, were the last pockets of fanatical Nazi resistance. The SAS jeep force, comprising B and C Squadrons One SAS, was commanded by Lieutenant Colonel Paddy Mayne, now a legend within the British army, whose DSO and two bars were testament to his fearless style of leadership.

Mayne split his force into two – C Squadron under the command of the veteran Tony Marsh and B Squadron led by Major Dick Bond, a less experienced but nonetheless competent officer. They set off early on the morning of 10 April, crossing the River Hase and heading north towards the village of Börger.

Bond's force was soon ambushed from a collection of farm buildings in a field to their west. Under heavy incoming fire, the men in the three jeeps at the front of the column had leapt into a drainage ditch that ran parallel to the lane to take cover. Bond and his driver had been shot dead by a sniper as they attempted to reach the stranded men.

Arriving at the scene, Mayne sized up the situation through his binoculars and then, taking a Bren gun from his jeep, he set off for the farmhouse with his driver, Billy Hull, at his

heel. Under covering fire from the lane, the pair reached the building unscathed, and Hull drew the sniper out of his lair for Mayne to kill him with a burst from the Bren.

Returning to the jeeps, Mayne jumped behind the wheel of one and roared off down the road with Lieutenant John Scott standing behind the twin Vickers in the back, spraying the woods with bullets. Mayne slowed briefly as he passed the trapped men, yelling, "I'll pick you up on the way back". Reaching a crossroads, Mayne swung the jeep round and came tearing back with Scott still working the machine gun. Twice more the jeep drove up and down the road, until finally the enemy fire subsided and Mayne judged it safe to rescue his men, yanking them out of the ditch with his immense strength.

Mayne was recommended for a Victoria Cross, with the citation describing how his "exceptional personal courage and leadership saved the lives of many men and greatly

"MAYNE SLOWED BRIEFLY AS HE PASSED THE TRAPPED MEN, YELLING, 'I'LL PICK YOU UP ON THE WAY BACK'"

Below: 'Paddy' Mayne wrenched this compass from an enemy aircraft with his bare hands during the SAS's first successful raid in Libya, on 14 December 1941. His comrade Jim Almonds believed he could attach it to their jeeps to improve desert navigation. This is typical of the innovation and adaptation that has become a hallmark of the special forces.



Portrait of Lieutenant Colonel Robert 'Paddy' Mayne in WWII, wearing his SAS cap



helped the Allied advance on Berlin". But the recommendation was later downgraded to a fourth DSO, a decision that seemed to puzzle even King George VI who, upon meeting Mayne in 1946, asked why the VC had "so strangely eluded him".

One of the men rescued by Mayne that day was Sergeant Albert Youngman, who served under the Irishman for three years in the SAS. "I owe him my life," he recalled in 2010, when a campaign was launched for Mayne's fourth DSO to be upgraded to a VC. "I don't think the fact we're talking about something that happened nearly 70 years ago matters," he said. "Time is irrelevant: he should have been awarded a VC in 1945 and so this campaign is about righting a wrong."

The campaign didn't succeed, but nonetheless Mayne's reputation as one of the greatest guerrilla fighters of any war remains undimmed.

Below: Lieutenant Colonel Paddy Mayne and Lieutenant John Scott used a jeep similar to this to tackle a German ambush and rescue trapped SAS men



SIR RONALD HUGH GRIERSON, — THE GERMAN-JEWISH — COMMANDO

GRIERSON WENT FROM BEING IMPRISONED AS A FOREIGN NATIONAL TO SERVING IN THE SAS

A German Jew, Grierson was born in Nuremberg as Rolf Griessman. He served in the SAS during World War II after also serving in the Black Watch. During the Nazis' rise to power his wealthy family had moved him to schools in Paris and eventually London.

In 1940 Grierson was arrested in Shropshire and interned as a foreign national. He was cleared three months later and enlisted in the British Army. Parachute training with the Army

Air Corps aided his transfer to the SAS, and he served in North Africa, Italy, France, Germany and Norway. In 1945, while serving with B Squadron SAS, he was wounded and captured.

He was demobbed as a lieutenant colonel in 1946, but he was re-commissioned from 1948-1952 and joined the newly formed 21 SAS. After leaving the army Grierson became a prominent banker, businessman and charity worker. He died in October 2014.

Below: Ronald Hugh Grierson's SAS beret



A Black Watch tunic belonging to Ronald Hugh Grierson



Below: Sir Ronald Grierson pictured in 2012





RUSTY FERMIN & THE EMBASSY SIEGE

THIS MASKED AND OVERALLED MEMBER OF THE SAS STORMED THE IRANIAN EMBASSY TO END THE SIEGE IN 1980

Rusty Firmin was Blue Team leader during the Iranian Embassy siege, leading the men who entered the building from the back. These are his overalls and respirator, which were worn during the siege itself. He also carried a Browning Hi-Power 9mm handgun, a handgun that proved so reliable it was in service with the SAS for around 40 years.

Rusty Fermin's overalls, worn during the SAS assault on the embassy building



Above: Medal group awarded to D.J. 'Dia' Harvey, Special Air Service, Hampshire Regiment, 1964-1995

DJ HARVEY IN THE FALKLANDS

THE SAS CARRIED OUT SURVEILLANCE ON THE ARGENTINE FORCES

'Dia' Harvey wore this camouflage smock during his deployment in the Falklands, and the medal group includes the South Atlantic 1982 medal with rosette. G Squadron was inserted behind enemy lines to carry out covert surveillance on the Bluff Cove and West Stanley areas. They spent 28 days at a time undertaking this work. Dia was known for his skill and courage at positioning his observation posts very close to the Argentine forces, in order to gather detailed information.

"G SQUADRON WAS INSERTED BEHIND ENEMY LINES TO CARRY OUT COVERT SURVEILLANCE ON THE BLUFF COVE AND WEST STANLEY AREAS"

Left: Woodland DPM camouflage hooded smock, used by D.J. 'Dia' Harvey during his deployment in the Falklands

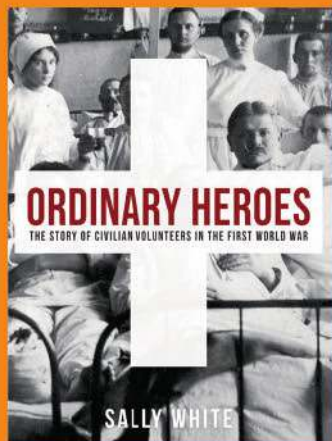


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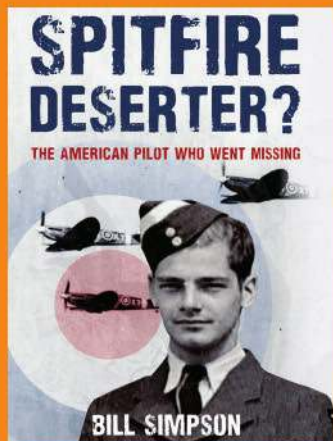
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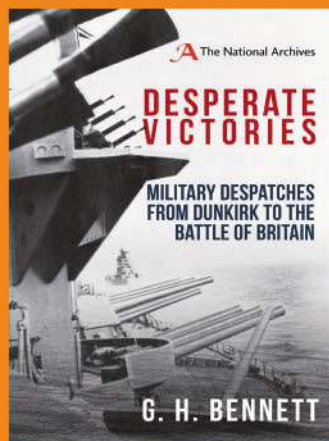
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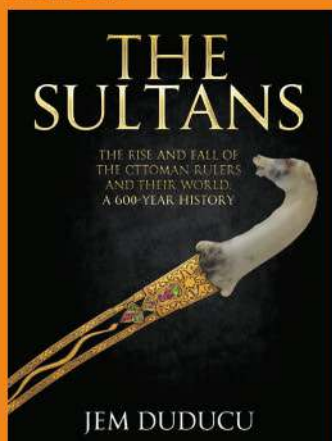
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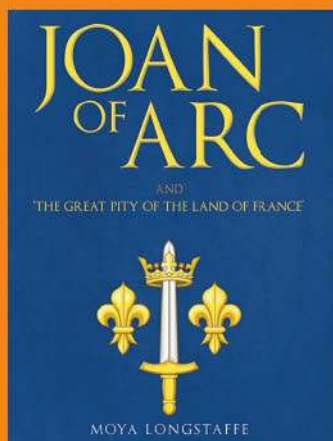
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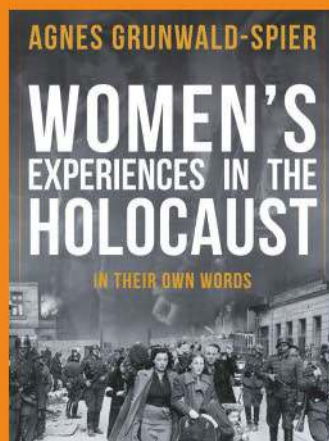
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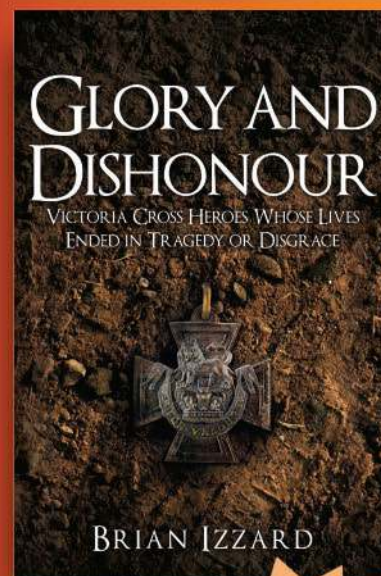
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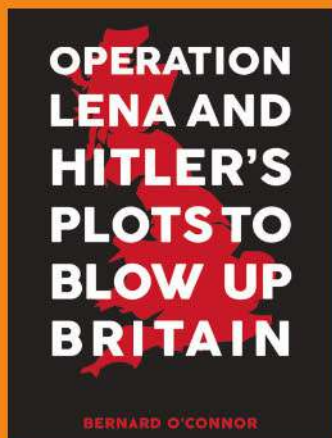


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THE RETURN OF NATIONAL SERVICE?

Calls for a return to military service is a recurring theme every few years, with many believing it to be a cure for many problems in today's society.

Robin Horsfall ponders whether or not they are right

British National Service began with an Act of Parliament of the same name in 1948. The subsequent wars, such as Malaya, Korea, Borneo and the Cold War made it necessary to maintain a strong defence capability without the immense costs of a large standing army, navy and air force. All fit young men were eligible for a

'call up' at the age of 18 for two years of military service. This could be deferred if the conscript was in a preferred and important job, such as mining or in higher education at university. To many, national service was considered a 'rite of passage' from boyhood to manhood. The time away from home, combined with the adversity, was believed to develop strong character.

Today, many people believe that a 'strong dose' of military service is just what the youth of today needs. The upside of national service was that it brought young people together from many lifestyles. People of different religions, cultures, classes and nationalities were forced to live and work together. 12-men barrack blocks offered very little privacy and nowhere to hide.

"RUSSIA STILL HAS COMPULSORY MILITARY SERVICE, WHICH MEANS THAT IT HAS THE ABILITY TO MOBILISE A LARGE, TRAINED, CONVENTIONAL FORCE IN A VERY SHORT TIME"



They were taught how to look after themselves, while personal hygiene, tidiness and cleanliness were imposed with draconian punishments for those who failed to come up to standard – there was no right of appeal. Men learned to work as a team to prevent punishment and raised their standards to the required level. The enemy were the regular army NCOs – full-time soldiers who lived the military life. Many of them thought national servicemen were inferior and a waste of their time.

This attitude from the regulars, most of whom considered themselves ‘war veterans’, was very much the downside. Young men with great potential were often humiliated and abused by mindless bullies for a large part of their two years. Much of the training was endless repetition combined with long periods of intense boredom. Low wages and limited access to local bars and clubs made many servicemen resent their service.

It has been claimed by contemporary psychologists that military service at a young age could be detrimental to a person’s mental health. I have to disagree, but I do understand the reason for such thinking. If we return to my previous comments about mindless abuse, then it is understandable to consider such programs damaging. What does cause mental health problems among young people in the modern world is lack of agency, poor role models and boredom.

In the 1960s and 1970s, thousands of young boys who were failing at school volunteered for

the Boys Brigades or Junior Military Service. They were all volunteers and considered the military a good opportunity to gain a trade or career. Junior soldiers received continued education, skills, apprenticeships, leadership training and teaching skills – all of course combined with intense military training. I was one of those young men, joining at the age of 15 in 1972. I am still in contact with many of those I joined up with, and I am not aware that any of them suffered psychological problems that they can link to their early training. Of my former fellow servicemen, two are majors, one is a captain, one an RSM of the SAS, two are university graduates and another a lord mayor.

The call for national service could be a positive one, if the negative aspects of the past are removed and the positive aspects retained. Modern national service could once again be a rite of passage from childhood to adulthood if the two years are combined with continued education and vocational skills training.

The United Kingdom desperately needs tradesmen, engineers, teachers, sportsmen, administrators, drivers and many other listed skills. If the two years combined military training with the acquisition of qualifications it would be attractive to the majority and easy to sell. By producing these skilled workers, national service could not be considered an expense, but more of an investment.

There would also be the added bonus of acquiring a large reserve military that could be called upon in a crisis. Russia still has

compulsory military service, which means that it has the ability to mobilise a large, trained, conventional force in a very short time. The United Kingdom is not currently capable of resisting such a force.

It should be possible to introduce a ‘non military option’ that followed the same format as the military option but with emphasis on environmental care, medical services, public duty, care for the elderly and other activities to substitute for the military training. In this system, those with physical disabilities or a conflict of conscience would still be able to complete their commitment.

For a return to national service to be successful, it would have to be universal and compulsory, without exception. It would need to take the participants away from their homes and peer groups, and it would have to retain them for sufficient time to achieve their aims and qualifications. Wages would be low and facilities basic, but the true pay would be in obtaining qualifications and the positive experiences of sharing life with others – it would be a true rite of passage to becoming a valued member of society. A modern national service could be the skills centre for the nation, the engine for future prosperity and a place where those who are unsuitable for academia can flourish and become the successful middle classes of the next generation. I support a return to national service if it is done well and done for the benefit of both the nation and the individual.

National servicemen drilling in 1953 shortly after their call-up. National service was once seen as a rite of passage into adulthood



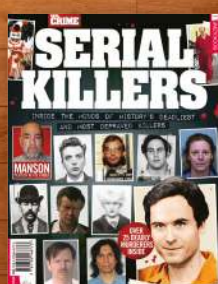
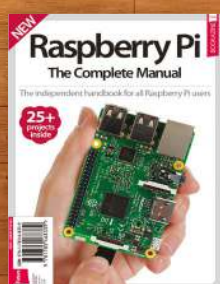
Robin Horsfall served in Second Battalion The Parachute Regiment and the SAS for ten years, before working in security roles around the world. Today he is an inspirational after-dinner speaker and writer. His book *The Words Of The Wise Old Paratrooper* is available on Kindle

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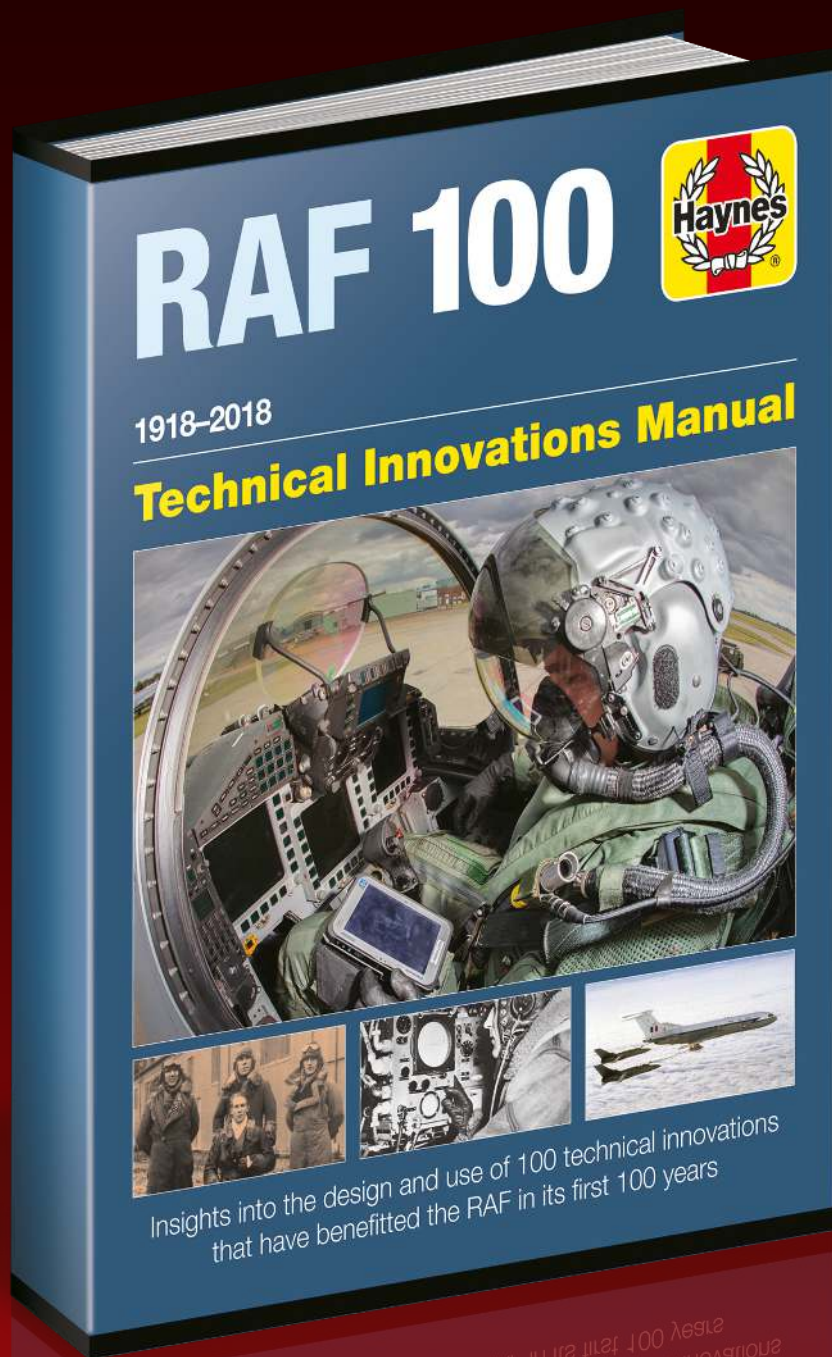
To commemorate 100 years of the RAF, the iconic publisher Haynes has released a manual dedicated to the technical innovations of the world's oldest air force. With over 200 pages of photography, technical breakdowns and the minute details for which Haynes manuals are renowned, this celebration of aeronautical prowess spans the engineering of the first fighter planes, right up to cutting-edge technology behind today's air fleet.

With its characteristic technical graphics, the manual also contains layouts of the RAF's many ground vehicles, as well as some of the key design

features that re-shaped aviation, such as the jet engine and the IFF (Indicate Friend/Foe) system. Each decade of the last century of innovations and advances is brilliantly displayed with over 300 illustrations, underlining how the RAF has maintained its position at the forefront of military aviation.

This issue *History of War* has five copies of *RAF 100: Technical Innovations Manual* to give away, each worth £25. For your chance to win, simply visit HistoryAnswers.co.uk and complete our short Online Readers' Survey.

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REVIEWS

Our pick of the latest military history books to hit the shelves

A SPITFIRE PILOT'S STORY

THE SPITFIRE AND THE MEN WHO FLEW THEM EPITOMISE THE COURAGE AND DEFIANCE THAT SAW BRITAIN THROUGH THE MOST PERILOUS DAYS OF WWII

Author: Dennis Newton **Price:** £16.99 **Publisher:** Amberley Publishing **Released:** Out now

The furious battle for air supremacy between the hugely outnumbered Royal Air Force (RAF) and Germany's Luftwaffe has been glamorised in books and on screen over the decades. What Dennis Newton brings to the party is a meticulously-researched account of the life of one player in this drama, Flight Lieutenant Paterson 'Pat' Clarence Hughes, who at the outset of the Battle of Britain came to symbolise the fighting spirit of the Spitfire pilot.

Hughes joined the Royal Australian Air Force as a cadet and took advantage of a scheme whereby Australian, New Zealand and Canadian pilots were offered a short-service commission in Britain. Following this, Hughes was accepted as an the RAF pilot in 1937. As a flight commander in 234 Squadron, Hughes scored his unit's first victories during July 1940, at the outset of the German campaign to bomb Britain into submission. In the following month, Hughes was involved in some of the heaviest fighting of the Battle of Britain.

The young Australian ace advocated bold 'close-in' tactics and served as an inspiration to the pilots under his command. In the last three days before his death in early September, at the age of 23, he contributed at least six victories to the squadron's tally of 63. On 7 September 1940 Hughes left Kathleen 'Kay', his bride of only six weeks, a war widow. The circumstances of his death remain shrouded in uncertainty. The tragedy did not conclude with her husband's death. Kay lost her son to a miscarriage, which sent her into a life of despair. "After that," she said, "I didn't care about anything except getting drunk and playing Pat's favourite record, *Where Or When*."

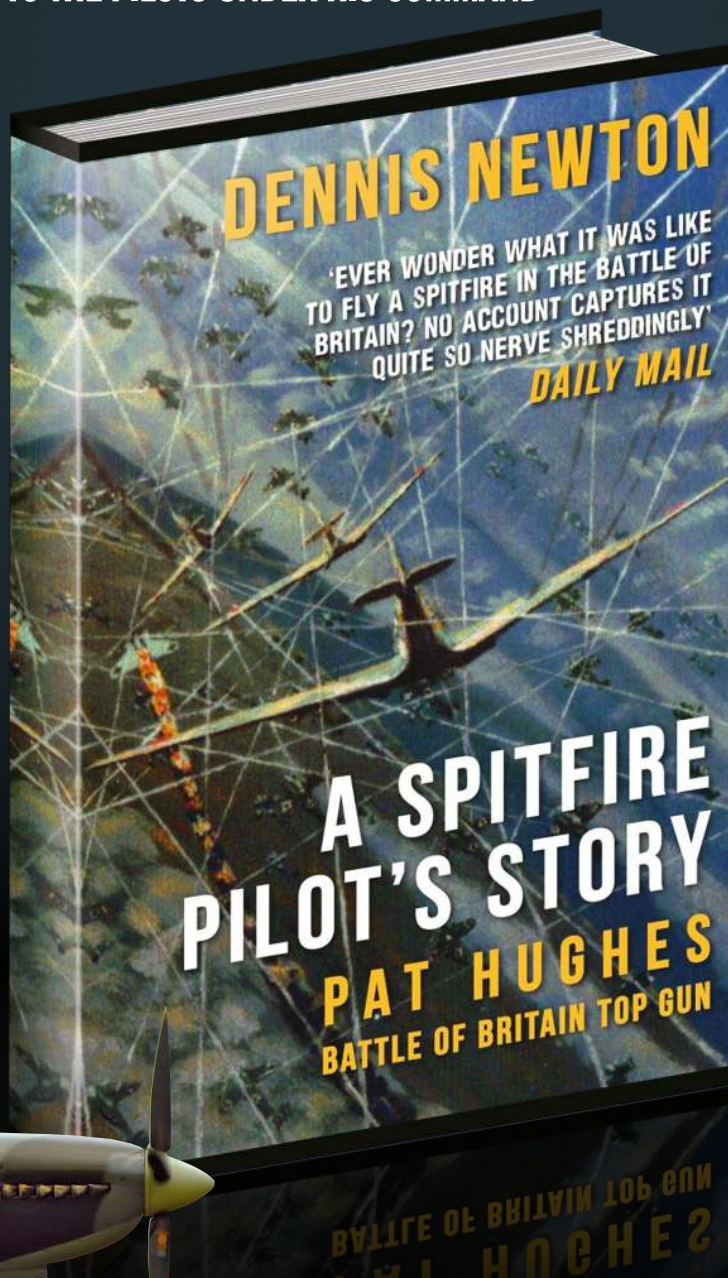
What is certain is that Hughes's personal sacrifice, along with that of more than 500 RAF pilots who died in the three and a half-month battle, served as the inspiration for Winston Churchill's celebrated tribute, "Never in the field of human conflict was so much owed by so many to so few."

Newton takes the reader on an almost day-by-day account of Hughes's role in aerial combat, right into the cockpit of the fighting machine that struck terror into the hearts of the enemy. The story has it that, as the Germans sustained increasing losses, Reichsmarschall Herman Göring summoned his top ace, Adolf Galland, to his headquarters to ask what he needed to gain aerial supremacy over southern England. The reply was, "Give me a squadron of Spitfires." The fact is that the Germans were confronted with the fastest and deadliest aircraft in the RAF, which later played a crucial role in other theatres of war, from Western Europe after D-Day to North Africa and Burma.

The heavy part of Hughes's combat career spanned roughly three weeks, during which he shot down 15 German planes. Most of these were Messerschmitt 109s, the Spitfire's greatest foe. This is the first biography of the remarkable pilot, whose tragically brief career is brought to life from personal papers and never-before-published photographs. As such, it ranks as a valuable addition to the history of the Battle of Britain.

The Spitfire, and the pilots who flew them, have come to symbolise the fighting spirit of the RAF during the Battle of Britain

"THE YOUNG AUSTRALIAN ACE ADVOCATED BOLD 'CLOSE-IN' TACTICS AND SERVED AS AN INSPIRATION TO THE PILOTS UNDER HIS COMMAND"



UNION JACK

JOHN F. KENNEDY'S SPECIAL RELATIONSHIP WITH GREAT BRITAIN

WAS JOHN F. KENNEDY THE ONLY PRESIDENT TO TRULY BUY INTO THE IDEA OF A SPECIAL BOND WITH BRITAIN?

Author: Christopher Sandford **Publisher:** The History Press **Price:** £20 **Released:** Out now

There have been countless books on John F. Kennedy and many on the so-called 'special relationship' between Britain and the United States. Christopher Sandford has decided to look into the matter more deeply in his latest book, having previously written on the relationship between Kennedy and Harold Macmillan.

Sandford's basic idea is simple – the special relationship has been one-sided in all of its incarnations, with Britain very much the junior (and inferior) partner. This has been the case no matter who was in the White House and No. 10, respectively. The one exception to this hard and fast rule, in Sandford's opinion, was the presidency of JFK.

Jack Kennedy's anglophilia has been considered many times, with opinions varying on how deeply it was rooted. The adoption of a certain aristocratic languor in his manner has been accepted, but was it just an affectation, or was it a symptom of a deeper connection?

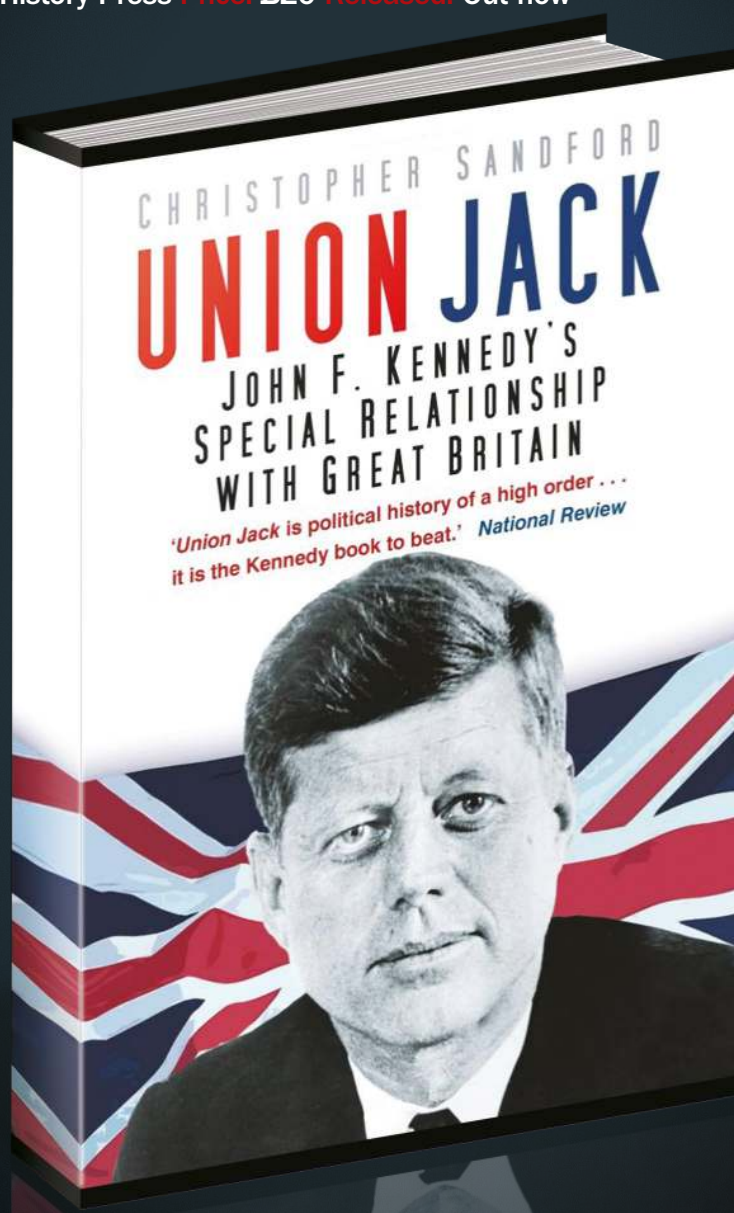
Sandford makes a telling point when he recounts how Kennedy was rescued (after his torpedo boat was rammed in the Pacific during World War II) by a native sporting a loincloth, a tattoo of the British flag and an impeccable English accent. Kennedy apparently quipped, as he climbed into the canoe that was to carry him back, "You've got to hand it to the British." It's a colourful anecdote, which gets the book off to an entertaining start.

Later, with his father acting as the US ambassador to the UK, the young Jack would be able to immerse himself in British society. He was not in a pro-British family (his father was most definitely not a fan), so a fondness for the British was far from inevitable, yet the affinity appears to have been genuine. Talking later of his affection for the venerable Macmillan, especially in contrast to other world leaders, Kennedy noted, "I feel at home with Harold because I can share my loneliness with him. The others are all foreigners to me."

Perhaps most remarkably, Kennedy proved even-handed in his approach to the problem of British-Irish relations, despite his heritage, and he would occasionally make small but meaningful gestures, such as when he embellished a mention of Britain in a 1955 speech, adding that they were "our strongest ally in NATO".

Whether this was heartfelt sentiment or merely the actions of an astute politician is difficult to say. Kennedy could not have been blind to the changing nature of the relationship, which, in Sandford's well-turned phrase, "had increasingly become one of a giant industrial complex and its loss-making overseas affiliate". This was painfully obvious in the aftermath of the Suez crisis, where Britain underlined its status as a power in decline.

Nevertheless, in times of crisis it was to Britain that Kennedy turned for advice, and he faced no greater crisis than that posed by Russian activities in Cuba at the end of 1962. Regular calls with Macmillan demonstrated Kennedy's trust and respect for the older man's counsel during a desperate period. It is this sort of detail that makes you suspect Sandford might just be right.



"KENNEDY WAS RESCUED (AFTER HIS TORPEDO BOAT WAS RAMMED IN THE PACIFIC DURING THE SECOND WORLD WAR) BY A NATIVE SPORTING A LOINCLOTH, A TATTOO OF THE BRITISH FLAG AND AN IMPECCABLE ENGLISH ACCENT"

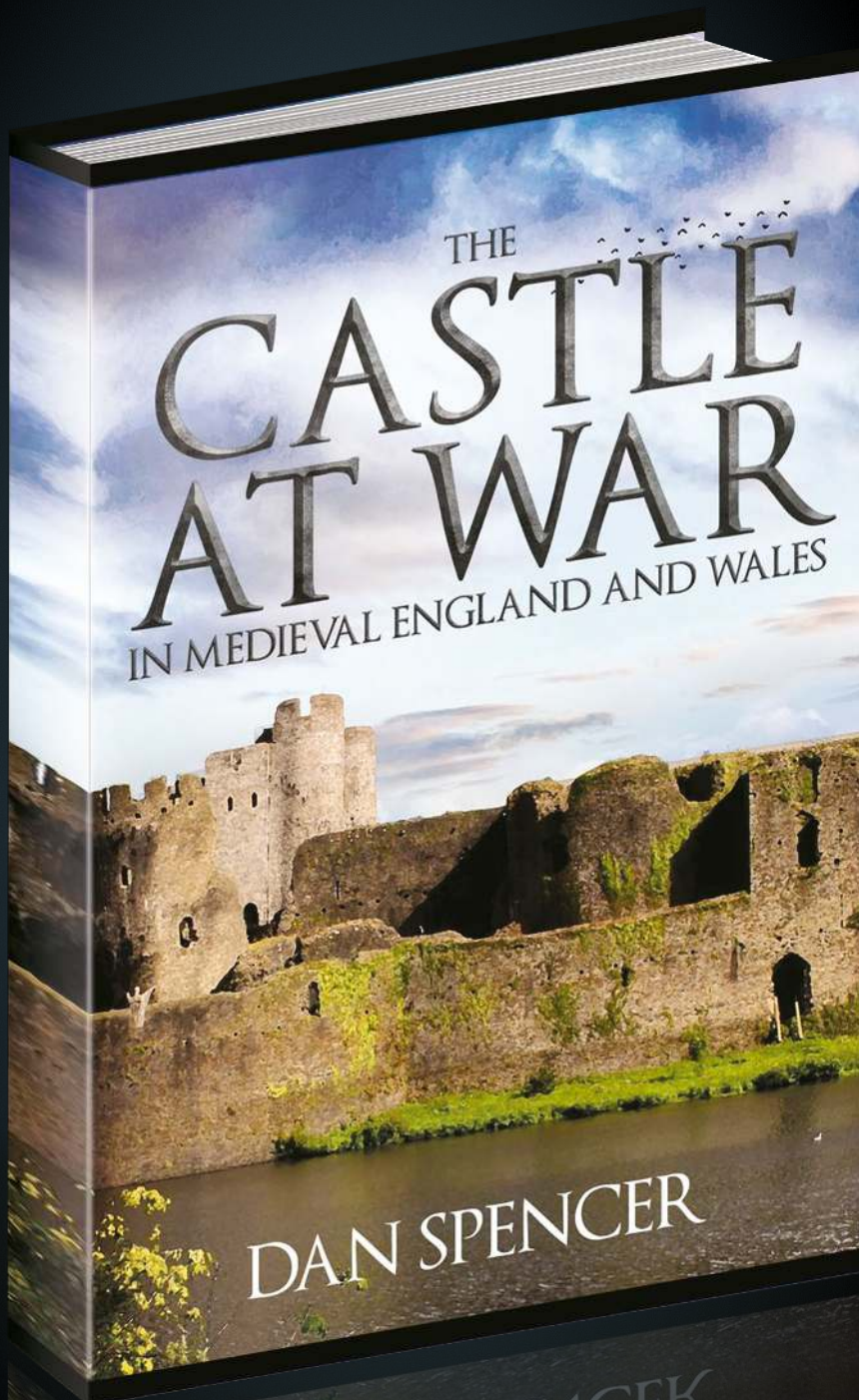


Left: Kennedy with Harold Macmillan, whom he appeared to trust and whose counsel he often sought

THE CASTLE AT WAR

THE HISTORY OF BANBURY CASTLE IS EXPLORED FROM THE NORMAN CONQUEST, THROUGH THE RISE OF GUNPOWDER TO ITS FINAL DESTRUCTION IN 1648

Author: Dan Spencer **Publisher:** Amberley Publishing **Price:** £20 **Released:** Out now



In 1648 the local authorities of Oxfordshire demolished Banbury Castle on the orders of a parliamentary committee. The purpose of this act of vandalism was to prevent the fortification falling into the hands of royalist forces during the height of the English Civil War. Since the outbreak of hostilities in 1642, it had twice been conquered and held by each of the opposing armies – by both supporters of Charles I and Oliver Cromwell's parliamentarians.

Banbury was one of numerous castles to become the victim of destruction during the turbulent 1640s. To discourage future royalist rebellions, the process was accelerated following the end of the Second Civil War three years later. The rationale was that an enemy was rendered more vulnerable by denying him a stone and mortar sanctuary.

In his book, Dan Spencer explores the strategic role of the castle in warfare in England and Wales, as epitomised by the struggle for mastery of Banbury. The rise and fall of castles throughout the Middle Ages, along with the story of their architecture, is a well-trodden theme of numerous historical works. Spencer's analysis follows a different path by focusing on castles in relation to their military history and specific conflicts, taking as its starting point the Norman conquest.

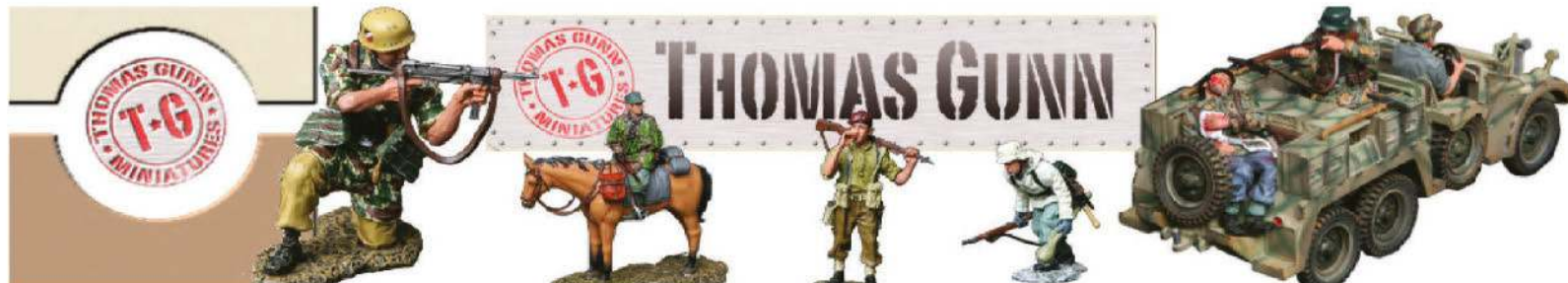
Spencer brings into the narrative illustrious military figures like William the Conqueror, King John and Edward I, all of whom feature as builders and vanquishers of castles. Changes in military technology and weaponry are likewise traced, including the author's speciality, the rise of gunpowder weapons. The book is enriched with in-depth research into contemporary historical chronicles and archaeological evidence.

Castles have played a crucial part in protecting England and Wales from foreign as well as domestic foes. As early as the 8th century, the Anglo-Saxon system of fortified towns came as a response to the specific circumstances of the time. A devastating raid on the Northumbrian monastery at Lindisfarne in 793 was followed by many years of Viking attacks throughout the British Isles. King Alfred the Great's success against the marauding Danes in 878 was achieved by devising a series of defensive fortifications throughout Wessex. These fortresses also made it possible to secure conquered territory in other parts of England. It was the Norman conquest that led to the development of fortified sites, starting with a castle at Pevensey and another at Hastings. These places provided safety for invaders in a hostile land.

Across the border, the long years of civil war in England gave the Welsh the opportunity to reassert themselves and drive back the Normans. By 1149, Madog of Maredudd, ruler of Powys, had expanded his power sufficiently to acquire Oswestry in Shropshire, where he erected a castle. The Welsh adapted to Norman warfare by making use of such fortifications, as well as destroying any they succeeded in capturing.

By the late 17th century, a few fortresses were garrisoned for coastal defence and some efforts were made to adapt castle defences in England's wars with France in the 18th and early 19th centuries. However, in time they came to be regarded as the romantic ruins of a bygone age. That was until the Gothic revival and the writings of novelists like Sir Walter Scott rekindled public interest in castles and the development of the heritage industry that has helped to preserve these monuments of early warfare.

"SPENCER'S ANALYSIS FOLLOWS A DIFFERENT PATH, BY FOCUSING ON CASTLES IN RELATION TO THEIR MILITARY HISTORY AND SPECIFIC CONFLICTS, TAKING AS ITS STARTING POINT THE NORMAN CONQUEST"



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WEST INDIA REGIMENT FLAG

This delicate regimental colour is the first depiction of black soldiers in the British Army, but has its origins in a monstrous crime against humanity



Image: National Army Museum

In the late 18th century Britain was heavily involved in the transatlantic slave trade. Over 3.4 million enslaved Africans were transported to the Americas until 1807 in British ships, taken primarily to the Caribbean.

As Britain's empire grew, more soldiers were required to garrison its colonies, particularly during the French Revolutionary and Napoleonic Wars. These conflicts spread to the West Indies, but the mortality rate of European soldiers based in the Caribbean was extremely high. Disease, rather than the enemy, killed 90 per cent of the British soldiers who died there between 1793-1815.

In 1795 it was decided that West Indian regiments of black soldiers would be raised in the region, because it was believed that they would be better suited to the tropical climate. Some of the first recruits were escaped slaves

from the American War of Independence, but most were African or mixed-race slaves.

Between 1795-1807 approximately 13,400 slaves were purchased for the regiments from sugar plantations or newly arrived ships. It is estimated that the army bought seven per cent of all slaves sold in the British West Indies, and some believe that the reliance on these conscripts prolonged the slave trade until 1807. After the trade's abolition all serving slave soldiers were freed and were increasingly given the same rights as white troops.

This pictured flag is the regimental colour of the Fourth West India Regiment. Raised in 1795, this infantry regiment served in Martinique and Guadeloupe during the Napoleonic Wars until it was disbanded in 1819. The flag is noticeable for the inclusion of two delicately embroidered infantrymen, which makes it the first ever depiction of black soldiers in the British Army.

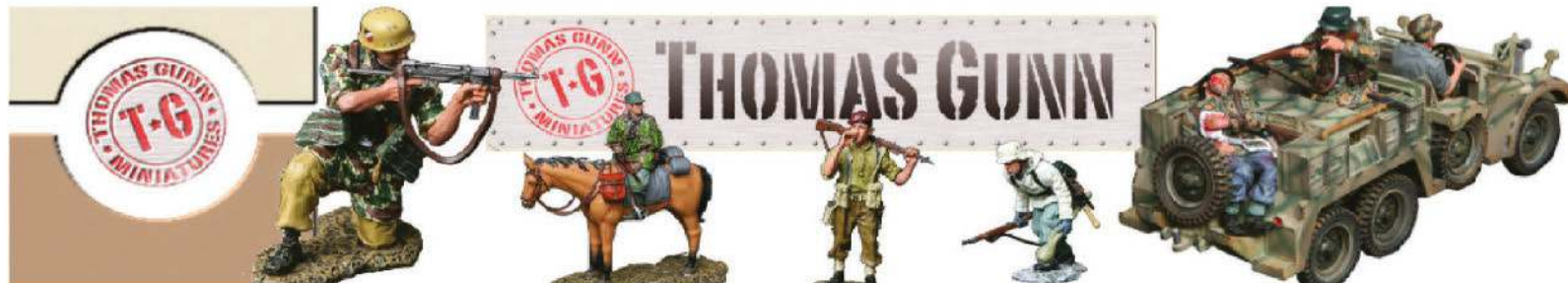
Most slave soldiers considered themselves to be superior to slaves who remained working on plantations, with one contemporary noting that they "carry themselves proudly"

**"APPROXIMATELY 13,400
SLAVES WERE PURCHASED FOR
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Major anniversary occasions World's First Colour Gold Quarter Sovereign

This year Britain celebrates one hundred years of the defence of our skies. In 1918 - one hundred years ago - the Royal Air Force was formed and since that time it has defended us from the air.

Through World War Two and the Battle of Britain, the Cold War, the Falklands War, the Gulf War and right through to today, Britain's air defence is crucial to our national security.

NEW COIN FIRST BUT FEWER THAN 1 IN EVERY 5,000 UK HOUSEHOLDS CAN OWN ONE

It's not so much the anniversary that has collectors and gold buyers excited, as the announcement of a new gold quarter sovereign coin being struck that is a world first.

To mark this nationally significant anniversary, Hattons of London has independently designed a commemorative gold quarter sovereign coin and it features the Union Flag in full colour - never before has a quarter sovereign been struck with full colour in its design. This is why people will be determined to get their hands on one.

FEATURES THE HURRICANE: HERO OF THE BATTLE OF BRITAIN

The quarter sovereign coin features the front section of a Hawker Hurricane, with the Union Flag in full colour in the background.

The distinctive outline of the nose section, wings and cockpit of the Hawker Hurricane - a 'hero' of the Battle of Britain - celebrate its contribution to the defence of our skies.

During World War Two a total of 14,583 Hurricanes were produced. It was a 'workhorse' of Fighter Command: it featured a fabric covered fuselage, was quick to repair and withstood considerable punishment. Turn-around time - to re-arm, refuel etc. - was just nine minutes from landing to taking-off again. By comparison a Spitfire took twenty-six minutes.

ONE OF THE WORLD'S MOST IMPORTANT COINS

It is significant that a gold quarter sovereign be struck for this important national anniversary - the sovereign series is itself one of our greatest national symbols.

The gold sovereign was first struck in the modern British era in the year 1817 during the reign of King George III. The new sovereign coins (a full sovereign and half sovereign were issued from 1817, a double sovereign from 1823 and a five sovereign coin from 1887) were the basis of a coinage that lasted Britain until the end of the Gold Standard. The quarter sovereign was first struck in 2009.

The sovereign was quite simply the greatest gold coin of its era. During the reign of Queen Victoria, the British sovereign was official legal tender in more than 30 nations and territories around the world, and accepted in many others.

That global acceptance was a result of its unparalleled reliability of purity and weight. Even today, just the mention of the word 'sovereign' evokes feelings of pride and security in the minds of most of us.

STILL MINTED TODAY

Sadly we no longer have sovereign coins in everyday circulation. What many people don't realise though is that they are still struck for those interested in owning gold.

The sovereigns minted today are struck to the same purity they have had since 1817 - solid 22 carat gold.

BREXIT UNCERTAINTY

Recent uncertainty caused by the Brexit process has caused many people to reconsider gold. It is a truly international 'currency' and unlike other assets that must reside within a specific geographic territory, it is portable and also physical.

It even has a special status within Britain: it can be bought without paying any VAT. This is a coin that sits beyond the reach of the Chancellor of the Exchequer!

QUARTER SOVEREIGN COIN WITH COLOUR IS WORLD'S FIRST

Never before has a quarter sovereign coin featured full colour in its design. It is a fitting tribute to the hundred year anniversary of the defence of Britain's skies.

This first of its kind gold quarter sovereign, minted from solid 22 carat gold, is restricted to just 4,999 coins. This means that fewer than 1 in every 5,000 UK households can own one.

Those interested in owning one at a £100 saving for just £99 (plus £4.99 for P&P) should contact Hattons of London whose contact details appear below. This offer is not available elsewhere.



The world's first gold quarter sovereign coin with colour in its design has been independently designed by Hattons of London to celebrate 2018's one hundred years of the defence of Britain's skies by the Royal Air Force. Only 4,999 have been minted, meaning that fewer than 1 in every 5,000 UK households will be able to own one. A limited number are available only from Hattons of London with a £100 saving for just £99 plus P&P. Orders placed within 7 days qualify for a copy of the book 'The Defence of Britain's Skies' FREE of charge.



Applications made within 7 days will receive a copy of the 76 page full colour book "The Defence of Britain's Skies" by award winning documentary maker and author Stewart Binns, FREE of charge with their order. It presents the history of seven iconic British aircraft - including the Hawker Hurricane - and their impact



on the defence of Britain.

It may also be possible for you to acquire this important gold coin completely free of charge - you should phone Hattons of London and one of their advisors will explain how.

The coin may be returned within 60 days for a full refund. There is a strict limit of one coin per household, and this offer is limited to UK mainland households only. All applicants must be aged 18 or over.

It's worth noting too that within Britain sovereign coins have no VAT.

Make a £100 saving and order at £99 (plus £4.99 P&P) and claim your FREE copy of *The Defence of Britain's Skies* by calling now on:



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Major credit cards accepted. Offer valid until 22nd May 2018. Your order is covered by our no-questions-asked 60 day complete satisfaction guarantee | Technical specifications: Coin; quarter sovereign | Issuing authority: Tristan da Cunha | Diameter: 14mm | Date of coin: 2018 | Weight: 2g | Purity: Solid 22 carat gold | Hattons of London reserves the right to alter or withdraw this offer before the end date | Orders by post: send name, address, cheque, P.O. or credit card details to "FREEPOST Hattons of London" | Hattons of London Ltd, Company 10718280